

NOMINATIONS—OCTOBER

HEARINGS

BEFORE THE

COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION UNITED STATES SENATE

ONE HUNDRED FIRST CONGRESS

FIRST SESSION

ON

NOMINATIONS

OCTOBER 4, 1989

WARREN G. LEBACK, TO BE ADMINISTRATOR, MARITIME ADMINISTRATION

OCTOBER 24, 1989

JERRY R. CURRY, TO BE ADMINISTRATOR, NATIONAL HIGHWAY
TRAFFIC SAFETY ADMINISTRATION AND JENNIFER J. WILSON, TO
BE ASSISTANT SECRETARY OF COMMERCE FOR OCEANS AND
ATMOSPHERE, DEPARTMENT OF COMMERCE

OCTOBER 27, 1989

JAMES B. WYNGAARDEN AND J. THOMAS RATCHFORD, TO BE ASSO-
CIATE DIRECTORS, OFFICE OF SCIENCE AND TECHNOLOGY POLICY

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NOMINATION—OCTOBER

WEDNESDAY, OCTOBER 4, 1989

U.S. SENATE,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
Washington, DC.

The committee met at 3:05 p.m., pursuant to notice, in room SR-253, Russell Senate Office Building, Hon. John B. Breaux presiding. Staff members assigned to this hearing: John Graykowski, staff counsel; and Ruth Johnson, minority professional staff member.

OPENING STATEMENT BY SENATOR BREAUX

Senator BREAUX. Good afternoon. The subcommittee will please come to order.

This afternoon our hearing is to consider the nomination of Warren Leback, who is nominated and will be, hopefully, soon confirmed as our administrator of the Maritime Administration.

I hope that my good friend and Republican member, Trent Lott, will be on his way. If not, we will have unanimous consent to submit any statement that Senator Lott may have.

This afternoon, as I mentioned, we will be considering the nomination of Warren Leback, the President's nominee for the position of administrator of the Maritime Administration.

At the outset, let me say that this nomination has been one that has been long awaited by this committee. I have mentioned many, many times the importance of moving quickly through this nomination, and I am glad to see that we now finally have received the nomination papers and it appears that the administrator's job will be filled before the end of the year.

Warren Leback comes to us well qualified to assume this position. He has spent most of his life involved in maritime-related affairs.

He started out as a deck officer working on ships, followed by employment in a variety of commercial maritime activities such as shipbuilding (the management aspects), energy, and transportation. He even managed to put in a few years with the government as deputy administrator of MarAd, so there is little question about Mr. Leback's qualifications for the job.

I am confident that he knows the organization and the people that he will be working with in MarAd and throughout the government and industry.

I will also add that he also knows and has a good working relationship with those of us in the Congress who will be dealing with the authorization and the appropriation process for MarAd.

He comes to the job at what I feel is one of the most critical times in our Merchant Marine history. That has also been said many times in the past, but I think it is no more true than it is today.

There are real questions about the ability of the U.S. flag Merchant Marine to respond to national emergencies. We do not have the ships, we do not have the people to crew those ships, and we do not have the shipyards to build and repair those ships.

I believe that there are fundamental and very serious problems facing the U.S. Merchant Marine. The President's own commission said that General Cassidy and Admiral Crowe and Cap Weinberger and others have all expressed very deep concern, and we really cannot afford to continue to wait and study the problem.

Leadership is needed, it is needed now in this regard to craft a new ODS program that will put more ships in operation and less ships in mothballs.

I would hope that Mr. Leback can provide that leadership and, as I have said, he has the knowledge and the skills that are necessary to do that. I am confident that when he will be confirmed to this position and that we will move aggressively in this direction, and I certainly look forward to working with him in the future.

I have opening statements from Senators Kasten and Gorton that I will insert in the record.

[The statements and biographical sketch follow:]

OPENING STATEMENT BY SENATOR KASTEN

Mr. Chairman, my main concern with the nomination of Mr. Leback to be MarAd Administrator centers around the concern of legislators from the Great Lakes region as to the continuation of the Great Lakes set-aside for PL 480 Title II commodities. As a part of a compromise reached in the 1985 Farm Bill, the U.S.-flag cargo preference on food aid exports was increased from 50 percent to 75 percent, and 245,000 tons was set-aside for export through Great Lakes ports. Though the 75 percent preference remains indefinitely, the Great Lakes set-aside expires at the end of this year unless extended.

On September 21, the House Merchant Marine Subcommittee held a hearing on H.R. 3002, a bill to extend the Great Lakes set-aside. In the policy discussions between the different departments and agencies to determine the Administration policy, I believe the Maritime Administration was supportive of the set-aside, while other Departments, particularly Agriculture, were opposed. The Administration opposed H.R. 3002 at the hearing.

I am concerned as to the viewpoint of Mr. Leback on this important issue. If further discussions are undertaken in the future, I would like to think that the one agency and Department that championed the compromise reached in 1985 would continue to urge that position within Administration discussions. Much of that will depend on the outlook of the Administrator and I look forward to inquiring into that.

OPENING STATEMENT BY SENATOR GORTON

I am pleased to lend my support for the nomination of Warren G. Leback to be the Administrator of the Federal Maritime Administration. Mr. Leback has spent his entire career in the maritime field and, thus, brings a wealth of knowledge and experience that should serve him well in his new capacity. It is seldom that the federal government is able to attract an individual with a background both in the relevant industry as well as in the relevant agency. We have such a case with Mr. Leback and this should serve him well in quickly moving to meet the challenging and important issues before the Maritime Administration.

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United States Senate

COMMITTEE ON COMMERCE, SCIENCE,
AND TRANSPORTATION

WASHINGTON, DC 20510-8125

STATEMENT FOR COMPLETION BY PRESIDENTIAL NOMINEES

(If more space is needed, please use attached REMARKS sheet)

A. BIOGRAPHICAL DATA

1. Name: Leback Warren G.
 (Last) (First) (Other)

Address: 2-B Warten Road
 (Current residence) (Business)
Princeton, N. J. 08540

2. Position to which nominated: Maritime Administrator Date of nomination: August 4, 1989

3. Date of birth: March 17 1924 Place of birth: Chinook, Washington
 (month) (day) (year)

4. Marital status: Married Full name of Spouse: Dorothy Jewel Leback

5. Names and ages of children: Warren Thomas Leback 40 years
Christine Louise Sitwell 38 years
Karen Frances Leback 37 years

6. Education:

Institution	Dates attended	Degrees received	Dates of degrees
United States Merchant Marine Academy	1942-1944	Bachelor of Science	6/21/50

(NOTE: Degree awarded to those graduates who prior to 21 June 1950 completed additional courses, credits and had obtained a Master's or Chief Engineer's License.)

7. Employment record: List all positions held since college, including the title or description of job, name of employer, location of work, and dates of inclusive employment.

From	To	Name of employer	Address	Type of work
1944-1960		Grace Line Inc. Steamship Co.	New York, N. Y.	Deck Off., Master, Port Capt., Terminal Supt.
1961-1964		Central Gulf Inc.	New Orleans, La.	Vessel Operating Mgr. Vice President, Vessel
1965-1972		SeaLand Service, Transport	Elizabeth, N. J.	Oper. & Ship Construct
1973-1974		Interstate Oil	Philadelphia, PA	Assistant to President Vice President,
1975-1980		El Paso LNG Co.	Houston, TX	Vessel Operations Deputy Maritime
1981-1984		U. S. Government Management, Inc.	Washington, D.C.	Administrator Senior Vice-President,
1985-1988		Puerto Rico Marine	Edison, N. J.	Vessel Operations

8. Government experience: List any experience in or direct association with Federal, State, or local governments including any advisory, consultative, honorary or other part-time service or positions.

Served as Deputy Administrator, Maritime Administration, Department
of Transportation, Washington, D. C. 1981-1984

9. Political affiliations activities: List all memberships and offices held in or financial contributions and services rendered to all political parties or election committees during the last 10 years.

Republican, no office held, periodic financial contributions to the
National Republican Party as well as various Senators and Representatives
as permitted by law.

I made a contribution to the 1988 re-election of Congressman Robert
Torricelli - basis, friend of the family and a classmate of my daughter.

Chairman of Maritime Citizens for the Re-election of Governor Hernandez

Colon of Puerto Rico in 1988 - basis, Sr. Vice Pres. of Puerto Rico
Marine Management, operating contractor for Puerto Rico Maritime Shipping.

10. Memberships: List all memberships and offices held in professional, fraternal, scholarly, civic, charitable, and other organizations.

United States Merchant Marine Academy Alumni Association (Past Natl Preside

Member, American Bureau of Shipping

Member, Society of Naval Architects and Marine Engineers

Member, American Society of Naval Engineers

Member, Council of American Master Mariners

Member, Marine Society of the City of New York

Member, Nautical Institute

(Continued on Page 10)

11. Honors and awards: List all scholarships, fellowships, honorary degrees, honorary society memberships, and any other special recognitions for outstanding service or achievement.

Outstanding Professional Achievement Award (1964) U. S. Merchant Marine Academy

Marine Man of the Year - Engineering (1971) U. S. Merchant Marine Academy

Alumnus of the Year (1978) U. S. Merchant Marine Academy

Dedicated Service Award (1984) U. S. Merchant Marine Academy

Senator BREAUX. To present him to the committee to show the support over in the House as well as here in the Senate, we are delighted to have my former colleague and committee member from the House, the Honorable Norman Lent.

Norm, glad to have you and receive any comments you might have.

**STATEMENT OF HON. NORMAN F. LENT, U.S. REPRESENTATIVE
FROM NEW YORK**

Mr. LENT. Good afternoon, Mr. Chairman. It is a pleasure to be with you once again and also to the guests who are here.

Mr. Chairman, as ranking member of the Merchant Marine Subcommittee of the House Merchant Marine and Fisheries Committee, it gives me a great deal of pleasure to present to this distinguished committee the administration's nominee for the office of Maritime Administrator within the U.S. Department of Transportation.

Warren Leback is no stranger to this committee or to government service, having served with distinction as the Deputy Maritime Administrator from 1981 until 1985.

In that role Mr. Leback worked with both the Senate and House committees and subcommittees having oversight of America's Merchant Marine and related interests, and I look forward to the opportunity to again work closely with him on the House side.

I believe it must be reassuring to the Senate to consider the nomination of men and women already experienced in the tangle of bureaucracy that can engulf the most strong hearted among us.

However, Warren Leback's qualifications extend far beyond his government experience and add a greater measure of comfort to his nomination.

Mr. Chairman, the issues facing America's Merchant Marine require action by a maritime administrator capable of understanding the maritime industry itself in all its facets, ship construction, ship operations, the maritime marketplace, the strategic value of a strong American flag fleet, intermodal operations, long-range planning. The list goes on.

Ideally a candidate for this office would be a sailor with command experience on the bridge of virtually anything that floats. Not only would he know the difference between RO-ROs, LNG vessels and container ships and great bulk ships, he would have commanded each type.

Warren Leback is such a sailor having graduated from the U.S. Merchant Marine Academy in 1944 and worked his way to the coveted license, Master, Steam and Motor Vessels, Any Gross Tons, Oceans.

The ideal candidate for this office would also understand ship construction to better analyze the decline of America's shipyards and to appreciate the impact of labor, acquisition of new technology and market competitive forces toward any recovery of that industry.

Among his many ship construction credits Warren Leback supervised the construction of three 265,000 dead weight ton tankers, the building of ten new container ships, and the conversion of 28 troop

ships, dry cargo vessels and tankers into container ships, all for American flag operations.

He has hands-on experience with both domestic and foreign ship-building technologies as well as the rules, regulations and economics inherent in international shipping operations.

Another attribute for a maritime administrator would be a working knowledge of the competitive pressures facing America's Merchant Marine. The office requires understanding and appreciation of domestic and foreign shipping policies and their nuances, what is fair, what is not.

Warren Leback's background both as a former maritime deputy administrator and private sector shipping executive provides just such an understanding and appreciation of the real world of the Merchant Marine.

And finally, Mr. Chairman, a successful candidate for this office would have a keen interest in the strategic value of America's Merchant Marine and the interrelationships between maritime operations and other modes of transportation.

Warren Leback in more than 40 years of service to America's Merchant Marine, has demonstrated his dedication to this Nation's maritime tradition.

There is no doubt that the security of America aided by a strong merchant marine working in concert with the Department of Defense, is foremost in Mr. Leback's philosophy.

Mr. Chairman, I cannot overstate the qualifications and appropriateness of Warren Leback as Maritime Administrator. He has been and he will be again a valued partner for the Secretary of Transportation, dedicated to maintaining the high standards of this office and honoring the public trust, and I very proudly present to you, Mr. Chairman, Warren Leback.

Senator BREAUX. Thank you, Congressman Lent, for your remarks. I think you have clearly pointed out the support that he will have with the committees over on the House side, and that is a very good indication because joint cooperation is going to be absolutely essential to make some real progress in solving our problems.

We thank you for taking the time to come and spell out that support on behalf of the House and particularly the Merchant Marine and Fisheries Committee over there.

You are welcome to stay, but I am sure you have things to do over there.

Mr. LENT. Mr. Chairman, I hope you would excuse me, but because we have important business on the House floor, we expect to vote sometime within the next ten or fifteen minutes.

Senator BREAUX. Thank you very much.

Mr. Leback, you have been introduced and pronounced and everything else. We are delighted to have you and pleased to receive any comments that you might have.

STATEMENT OF WARREN G. LEBACK

Mr. LEBACK. Mr. Chairman, I do have a statement.

It is an honor to appear before the committee this afternoon as the Maritime Administrator designate of the U.S. Maritime Administration.

In preparing for this day, I spent some time considering the remarks that I want to make and looking for the proper words with which to frame my testimony. And knowing this industry, I finally settled on the words of advice, perhaps, which would be most appropriate for the hearing, and those were the words of Spencer Tracy, "Just know your lines and do not bump into the furniture as you go about."

Mr. Chairman, after 40 years in the maritime industry with the experience as a deck officer and a ship's master and operating ships ranging from breakbulk vessels to liquified natural gas ships, container ships and RO-ROs, with the experience of construction of more than 60 vessels and prior service in the Maritime Administration, I do hope I know my lines.

The value of that experience should help guide me in an office that will require new thinking about old persistent problems facing America's Merchant Marine.

The issues that concern this committee, the administration, and the maritime industry are all too familiar: inadequate military sea-lift, ODS reform, revitalization of the shipbuilding and repair capabilities, foreign competition, maritime technology are just to hit a few of the more prominent.

Within these large issues, other important topics require attention and also must be addressed aggressively. Certainly, though, the retention of the American flag on a fleet that is growing smaller each passing day is the immediate issue. Can we arrest that decline? The survival of America's Merchant Marine depends upon our ability to seek and implement creative and physical responsible solution to a broad list of challenges that are facing us today.

There is an array of obstacles that need to be cleared if we are to see a resurgence of an active Merchant Marine.

Consider foreign competition in and of itself. Competition is a positive market force, tempering costs, fueling innovation and enhancing the quality of goods and services. But, that kind of competition is based on the assumption that all interests are playing under one set of rules and on a level playing field.

With respect to international shipping, that is not the case. National economic philosophies and practices differ throughout the international shipping fleets skewing the chances for competitive parity among the nations. Disparate crew costs from one fleet to the next, differing depreciation schedules for ships themselves, import-export pricing differences, discriminatory practices having an effect on all U.S. flag carriers and many other factors act to unbalance the trade scales.

There are no quick fixes to remedy the progressive decline of our merchant fleet which has occurred over the past 25 years. The best the government can do in the near term is attempt to level the playing field and to seek innovations that will promote a more competitive fleet.

The role of the Maritime Administration as related to America's ocean-borne market must be one of support and promotion. We must be there to stand up for our maritime industries, to pitch for

them in the international marketplace, to represent them when we sit down with our trading partners, fighting for the rights of our fleet to trade head to head, market for market, and to insist that the unrestricted freedoms foreign carriers enjoy in U.S. operations must be fully reciprocated to U.S. flag carriers in their operations overseas.

We need to pursue new technologies that can serve to revitalize our shipbuilding and ship repair industries as well. However, all technology in the world alone cannot overcome the empty order book. I see some hope for the order book through the 137 tankers now operating under the Jones Act provisions of which 49 this year reached the age of 20 years and beyond.

There will be a need for the replacement of the U.S. domestic tanker fleet to bring it up to the environmental and operational standards of today and into the future.

Mr. Chairman, I am heartened by the most recent cooperative efforts between the Department of Defense and the Department of Transportation with respect to the future of strategic sealift. This Nation's Merchant Marine is of no less strategic value today than when it was pitched into the conflict at the outbreak of World War II.

It is clear that this administration acknowledges the continuing value of the Merchant Marine as part and parcel of our defense posture.

The Maritime Administration will continue to work in concert with the Department of Defense to ensure available modern responsive sealift capability because it is a strategically sensible route to take and because we know the concept has been tested in the heat of battle and found vital.

Secretary Skinner has just concluded the first stage of his national transportation policy program. In hearings in more than 30 cities around the Nation, leaders of industry, truckers, shippers, owners, operators, and the man and the woman in the street were given an opportunity to tell the government what they wanted and expected of a national transportation policy of which, of course, the Merchant Marine is part and parcel.

From a maritime perspective, the Secretary's teams heard from dozens of industry representatives, each concerned about the future of government support, each recognizing the need to work more cooperatively to overcome maritime's losses of the past 25 years, and each willing to consider innovative proposals in financing and policy.

That kind of willingness to look down new avenues will be the key to any maritime recovery.

Mr. Chairman, I believe the American Merchant Marine should be given access to the level playing field. The responsibility of a Maritime Administrator is to keep that field level.

And if I am confirmed, I am preparing to stand my watch and looking forward to the presence and participation of this committee on that bridge.

Thank you, Mr. Chairman.

Senator BREAUX. Thank you very much, Mr. Leback, for your statement and for the time that you have put into preparing it.

Let me ask a few questions that I would like you to respond to.

It has been brought to my attention that an article that you wrote several years ago created some controversy. These things always have a way of coming back, and I would like you to comment on the article that was concerning the Merchant Marine and in particular the Jones Act.

Could you give us a little discussion on the circumstances that prompted the printing of that article? What were your views at that time with regard to the Jones Act and what are your views with regard to it today?

Mr. LEBACK. Well, I always viewed the Jones Act as a piece of legislation that was designed to protect our domestic interest in the maritime field.

The article was written in response to the annual meeting of the Society of Naval Architects, and I wrote it with two purposes in mind: One, to be able to prepare and provide an historical document as to how we got to the Jones Act in 1920; that is, section 27E, and the other, more importantly, was to inform the public what would happen if you repealed the Jones Act at that point in time, or if you did it today.

Those proponents of defeating or repealing the Jones Act would have to understand that if you did it in one stroke of a pen or a vote of Congress, you would create financial havoc in the domestic maritime industry.

The government itself at that point in time had outstanding guarantees under the Title 11 program, five years ago, somewhere in the neighborhood of about \$4 billion. Today's segment of the Jones Act guarantees under Title 11 stands at about \$3.6 billion.

I said in effect in the paper, I believed it then, and I believe it today, if you want to change the Jones Act, you must take care how you do it, and you must do it over time.

I think the paper in its conclusion said it would take approximately a 10-year period to phase out financially, or to protect financially, those carriers who had built ships for the domestic trades without government assistance in United States shipyards for United States flag with U.S. crews and that you could not create a situation that would destroy the domestic trades completely for the sake of bringing in a few cheaply built, foreign built, U.S. flag vessels.

Senator BREAU. What is your opinion today and what would your opinion and your policy be as Maritime Administrator with regard to the Jones Act as far as viability or recommendations for any changes or anything dealing with it?

Mr. LEBACK. I support the Jones Act.

If there was an administration position to modify it, I would have to take a look at it. I still believe that you cannot repeal it overnight without creating substantial financial havoc in the industry. It would require the government to fulfill its obligations on those vessels that could default under the Title 11 agreement.

Senator BREAU. Well, if the Secretary called you up and said Mr. Administrator, what is your recommendation on the Jones Act. We are considering whether it should be repealed, what would your recommendation be?

Mr. LEBACK. Well, first I would recommend that we take a look at to what length of time it would take to depreciate out and repay

in obligations the existing Jones Act fleet. Whether it is the tankers to Alaska, the RO-RO's to Puerto Rico or the container ships to Hawaii, you would have to first take a look at what is the financial obligations on the part of the government and the domestic operators as to what effect it would have over the time which you could phase it out, if that was the position of the administration.

Senator BREAUX. Well, I am asking you, what would your recommendation be to the Secretary, who would hopefully ask you for a recommendation?

Mr. LEBACK. I would recommend that we take a very long, close look at it before we did anything or formulated a policy.

Senator BREAUX. I am trying to get a clear statement. Are you for it or are you not for it?

Mr. LEBACK. I support the Jones Act.

Senator BREAUX. There have been concerns by many members, both of the House and the Senate, with regard to the attempt to include maritime services in the ongoing GATT negotiations that are underway in Geneva.

I have asked Mr. Creelman about it on a number of occasions, and I know you probably are familiar with the issue. And I was wondering what is your opinion as to whether maritime services ought to be part of trade negotiations?

Mr. LEBACK. I would prefer to see them outside of the trade negotiations, outside of GATT, excluded from it.

Senator BREAUX. And why is that?

Mr. LEBACK. I do not think there is a place for them in there. There is enough in GATT as it is now. I think the negotiations that have been done by the members of the Maritime Administration and the Department of Transportation have served well. And I do not see any reason to change them.

Senator BREAUX. Let me have your comments, if you will, on the question of cargo preference. It seems like on a regular basis we are met with legislative proposals to increase the amount of cargo preference, while at the same time we are met with opposite proposals to decrease the existing cargo preference provisions that we have in the existing law.

As recently as this past week, efforts were made, and I would expect they would continue to be made, to exempt grain that is shipped under the aid program to foreign nations, exempting certain shipments to certain countries from the cargo preference provisions.

If they were to ask you what is your recommendation on that, what would it be?

Mr. LEBACK. I would recommend that we would uphold and adhere to the cargo preference laws as they are written. That goes back to the 1904 act and up through the acts of 1950. Title II in 1954; Public Law 480, and whatever else in the aid cargo.

But we must uphold what the Federal law requires.

Senator BREAUX. What would your response be if we were to waive it in certain instances? We would be able to ship more commodities because the price would be less than if we had to ship it under a cargo preference provision. How would you respond to that?

Mr. LEBACK. I think I would have to support the preference cargo acts. I would have to take another very close look at it—I have been away from it for five or six years—as to really how much more whether it be grain or corn or whatever else you are going to put in there, could actually be shipped if you waived the cargo preference laws.

Senator BREAU. Would you agree with the argument that, from a cost standpoint, I am not sure what the ball park figure would be, but assuming, say, 10 percent, for the sake of argument, that it will cost 10 percent more to send it in a U.S. vessel, that that extra cost is justifiable as a means of helping to preserve—protect the U.S. maritime industry, which is important to the security of this country?

Mr. LEBACK. Yes, I would agree with you.

Senator BREAU. Let me ask you about a situation with the Puerto Rican Shipping Authority. It is my understanding that while you were in that employment, an issue arose concerning the purchase of some Lancer vessels. I guess my question, then, would be to ask you what is your position, or do you have any views on the section 506 issues surrounding the Lancer vessels? And how are you going to handle that if you are to be confirmed as administrator?

Mr. LEBACK. Senator, I must state having been employed as recently as November 1988 by Puerto Rico Maritime Shipping Authority, that in the question of the section 506, I will have to recuse myself. I cannot participate in that decision.

Senator BREAU. And that includes meeting with staff or anybody within the inner workings of MarAd?

Mr. LEBACK. Yes. If I am confirmed, I cannot participate in any way, shape or form.

Senator BREAU. Let us talk about the ODS program, the operating differential subsidy program. For the whole period that it has been in existence, we have seen, despite the program, the continuing, very steep decline in the U.S. merchant marine. With the amount of money that we are spending, whether it is \$200 million-plus a year, it seems that we are still on the decline, which is giving us grave concern.

The administration, the previous administration, this administration—go back forever—have all been promising an ODS reform package. In your discussion before agreeing to accept the nomination, do you have any indication of when this is going to take place, if it is going to take place and, if so, what type of form it is going to be presented in?

Mr. LEBACK. I have been working as a consultant to the government during this interim period, awaiting the confirmation by this committee and by the Senate as a whole, ODS reform is not new to me. We worked on it back in 1982, 1983, and 1984.

It is one of those areas that I believe we need to level the playing field by bringing in within the scope of the monies available in the modification of the program all eligible U.S.-flag operators in international trades.

We expect to have, if I am confirmed, a position on it and a proposal probably within the next 60 days maximum. It is being worked on.

Senator BREAU. Has anybody within the administration talked to you regarding any proposals in the budget for next time that would include any funds available for any type of an ODS reform package?

Mr. LEBACK. I looked at the budgets. We do have ODS Reform in the fiscal year 1991 budget.

Senator BREAU. How important do you personally consider the whole ODS reform package to be? Is it something that you consider to be very high in priority? What are we going to have coming out of MarAd, and what type of a push are we going to have coming from you? Is it something that you are deeply committed to? Or do you want to start over and look at other possible areas? Just give me some information with regard to your feelings on it.

Mr. LEBACK. There has been quite a bit of work done within the agency itself, within the department. I understand there has been some work done within the committees on the Hill. There is some work going on on the constituent companies on the outside.

I have never been one to believe that we need to reinvent the wheel.

When I was asked to take this position, one of the first things I said is I am not going to conduct another study to go out six months or a year to determine what is wrong with the industry. There have been too many studies and there have been too many looks at it. Now we have to take and build on what has been done. And I intend to do that.

I think on ODS that the modification or the reform is a long time in coming. It is a cumbersome program to administer. It does not provide the operators with the assistance that they should have, particularly in the cash flow areas. I think there are some gross inequities in the playing field.

And one must also remember, Senator, that when you have two groups out there in international trade with the American flag on the sterns of both vessels and one is subsidized and one is not, the unsubsidized operator does have the certain protections afforded to him under the 1936 act.

By leveling that field and giving him the opportunity to play on the same field as the ODS operator, we are going to reduce the infighting and the problems that have existed within the industry. Where one company wants to do something, three companies jump in because the ODS system has permitted it.

Senator BREAU. How do you feel about the trade routes and other restrictions on competition?

Mr. LEBACK. Well, the trade routes originally were set forth in 1936 Act to conform with the then-existing services, with the then-existing companies, which have changed, gone out of business, consolidated, over the years, as you well know.

I believe a trade area is the better way to go in 1989 than a specific trade route that was part and parcel to the original act. As you well know, there was nothing sacred about the trade routes. They were developed because U.S. Lines, Delta lines, Grace Line ran here, and there.

And they conformed with the services then in existence.

Senator BREAU. We obviously cannot have good ships without good shipbuilders. What is your opinion of the condition of the U.S.

shipyards? And what needs to be done to help them, if anything, in your opinion?

Mr. LEBACK. Well, I have built a considerable number of ships in U.S. yards. I think those yards that are strictly building naval vessels today are doing a capable, creditable job on it, for the product they are turning out.

I think we can do the same thing for those yards that are primarily private sector yards or building for the private sector.

Senator BREAU. What would that include? I mean are you talking about any government programs to assist them? Any construction subsidies, or what?

Mr. LEBACK. Yes, I am.

If I may say, history has shown that our most successful building programs in this country is where we have standardization have produced a ship that has been very efficient, very valuable to our trades.

And I do not have to go back to World War II vessels for that. Historically, it was done in the 1950's and 1960's.

Senator BREAU. If you believe, then, that the government should be involved in helping the shipbuilders, there are a number of things that seem to not be working very well. One is the simple concept of the government being involved in research and development on ship design and modernization efforts to ensure that industry is able to give us the best ships.

The administration, I think, opposed even a \$3.7 million—which is really peanuts in a trillion dollar budget—research and development program.

What are your thoughts about that?

Mr. LEBACK. Well, historically, in the shipping industry, only the major tanker companies have been able to do research and development on their own, because of the overall makeup of the organization or their financial wherewithal. They have been able to do research and development within the tanker field.

The dry cargo companies have not had the funds available on their own to do an extensive research and development of vessels and systems, with the exception probably of when we went to containerization, which was done by one company, but also done with existing vessels and some government assistance in it.

Senator BREAU. I do not want to put words in your mouth, but I take it to understand, then, that you would support and argue for a role for the government with regard to research and design efforts on modernization of the fleet?

Mr. LEBACK. Yes, I think I would have to. It is my belief that the industry itself does not have the financial funds available to do that. And if we are going to put this fleet back into a position to be competitive and meet our demands or our requirements for sealift, we have got to look to government to provide an infusion of funds.

I do not know how much that would be, but it will have to be some government assistance.

Senator BREAU. Okay. Outside of the design and research and development areas, the area of construction differential subsidy, call it anything else you desire, what is your thoughts about the necessity for that, the wisdom for that, or whatever?

Mr. LEBACK. I do not think that the construction differential subsidies, as they were applied, were the right way to go. I think there is a better way to manage the government's money and the industry's money in building ships in the United States.

Our most successful programs were built under government-sponsored programs, where the vessels were constructed for a specific purpose, and then sold at a floor price that made them competitive in the world market, without regard to a lengthy study as to the differentials between what it would cost in this country and what it would cost foreign.

Senator BREAU. Industry, on the shipbuilding side, has currently filed a section 301 petition against a number of countries that they allege have been operating unfairly with regard to the treatment of these countries' own shipyards.

Do you have any thoughts about the merits or demerits of that?

Mr. LEBACK. Having the experience of having built ships foreign and purchased vessels that were on the ways, prior to completion, and then finding that construction subsidy rebates were due the operator, I would have to say that the Shipbuilders Council does have merit in looking at the unfair practices that exist throughout the world.

I could not say anything less than that, having experienced it.

Senator BREAU. Another area is the question of the sale of vessels that have benefitted from U.S. programs, such as Title XI. The general requirement, as I understand it, is that vessels that are subject to Title XI guaranteed loan programs, if they are benefiting from those programs, cannot be later sold to any foreign owners. The purpose being, if it is a U.S. program, the United States should benefit from those ships.

I would like to ask you in general what are your thoughts about the wisdom of that program? And second, to consider from a policy standpoint, should we allow the general intent, I think, of that statute to be circumvented, perhaps legally, by allowing those type of vessels to be purchased by U.S. chartering companies, and then bare boat chartered to foreigners.

Is that something, from a policy standpoint, we need to be involved in? Is it working properly from your perspective? Do you have any recommendations?

Mr. LEBACK. I think I would have to answer I would want to look at it to make sure that the sale of U.S.-flagged vessels that have either been built with government assistance, guaranteed on the financing of them by government assistance, or in the private sector, that wherever that sale is made, it has to conform to and stand the light of the day as far as the Shipping Act of 1916 is concerned.

Senator BREAU. What is your viewpoint of the intent of that restriction in the existing law? What do you think the purpose was? How do you interpret what the purpose of that act was?

Mr. LEBACK. You mean the 1916 Shipping Act?

Senator BREAU. With the specific requirement of preventing the sale of those vessels to foreign ownership.

Mr. LEBACK. I have not done any research on the legislative history of that act. But I would assume, from history that we have been on a roller coaster, as far as this industry is concerned.

There were a tremendous number of vessels that fled the flag during the Civil War, and then also we were at a low point again, like we are today—

Senator BREAUX. There were a number of States that fled the flag, too.

Mr. LEBACK. Right. Well, I am only interested in the ships.

Senator BREAUX. They came back.

Mr. LEBACK. Right. The ships did not. There was a concern about that. Also then, during the Spanish-American War, we had problems transporting troops, materiel and equipment just 90 miles from Florida to Cuba.

When World War I broke out, our fleet was in very poor shape and I believe, this was the wisdom that was generated in Congress at that time, that they wanted to protect the assets of the vessels as national assets for the defense of the country. They required rather stringent citizenship requirements before you could transfer or sell the vessel.

Maybe I have confused you, but I just think that it was put in place for a purpose for national defense and economic defense.

Senator BREAUX. Well, I have no preconceived notions whatsoever of how that should be interpreted. And it is a policy question that I think we are going to have to look at from a congressional standpoint to determine, number one, what the policy is and what the intent was and number two whether it is working, and make it very clear, one way or the other, as to how it should work.

Well, I thank you very much. I think that we will probably have some other questions that will be submitted, perhaps; perhaps not—opening statements, perhaps.

I am certainly well satisfied with your qualifications. I think you have answered the questions very clearly and precisely. And if we have anything else to follow up with, we will be back in touch with you.

I do not know when we have it scheduled for. Oh, we have it scheduled for reporting it out of the committee tomorrow, and we want to get you to work as quickly as we possibly can.

I am glad to have you on board and look forward to working with you.

Mr. LEBACK. Thank you, Senator. It has been my privilege.

Senator BREAUX. Thank you.

No further action from the committee; the subcommittee will stand adjourned until further call of the chair.

[Whereupon, at 3:47 p.m., the hearing was adjourned.]

[The following information was subsequently received for the record:]

POST HEARING QUESTIONS FOR MR. LEBACK BY SENATOR KASTEN

Question. What is your view of the Great Lakes set-aside, and though Administration policy appears to back away from the compromise of 1985, will MarAd under your leadership continue to advance the set-aside in any further discussions within the Administration on this subject?

Answer. The mission of the Maritime Administration is to promote the U.S. merchant marine; to support, where appropriate, the many interests related to American waterborne commerce; and to assure a viable maritime component to our defense logistic capabilities.

If confirmed, I believe my policies must be supportive of the U.S. maritime industry as a whole, but that I will also have the responsibility to ensure that all the interests of the Great Lakes are represented in my discussions within the Administration.



NOMINATION—OCTOBER

TUESDAY, OCTOBER 24, 1989

U.S. SENATE,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
Washington, DC.

The committee met, pursuant to notice, at 10:05 a.m., in room SR-253, Russell Senate Office Building, Hon. Richard H. Bryan presiding.

Staff members assigned to this hearing: Linda Lance and Kevin Curtin, staff counsels; and Ruth Johnson, minority professional staff member.

OPENING STATEMENT BY SENATOR BRYAN

Senator BRYAN. The hearing will come to order. I would like to welcome everyone this morning to the hearing of the commerce committee, on the nomination of General Jerry R. Curry, who the President has selected to serve as the Administrator of the National Highway Traffic Safety Administration or NHTSA. This is an office of tremendous importance.

It is the head of an agency with a responsibility that can be simply stated—to save lives. Obviously, nothing could be of greater significance, or more deserving of the efforts of our most highly qualified individuals.

NHTSA's primary responsibility is to improve the safety of our vehicles and our highways; and, indeed, in its 20 years of activity, it has done so. Since the agency was created in 1966, the number of motor vehicle fatalities per 100,000 licensed drivers has been cut nearly in half.

However, more than 40,000 people each year are killed on our Nation's highways, and motor vehicle-related injuries are the leading cause of death for children over the age of one year.

There can be no doubt that all of us who work with these issues, most importantly, the Administrator of NHTSA, still have our work cut out for us.

Moreover, the NHTSA authorization legislation that I introduced as S. 673, and which now has passed the Senate, reflects, I believe, a concern that in the last administration NHTSA was not as aggressive, energetic, or efficient as it needs to be in its effort to prevent highway deaths and injuries.

The Senate legislation set certain priorities for the agency and requires the completion of action on those priority issues within particular time periods. Such legislative requirements would not have been necessary if the agency itself had been properly carrying out its duties and responsibilities.

Unfortunately, the performance of NHTSA in the past has, in my judgment, left something to be desired.

However, we in the Congress recognize that we have a new administration. And I think, simply stated, we hope that the history of the past administration will not be prologue, with respect to this administration, insofar as the responsibilities of NHTSA is concerned.

I know that our nominee understands and appreciates the literally life and death importance of the job for which he has been selected, and that if he is confirmed, we can look forward to a new day of renewed energy and commitment at NHTSA.

I have been informed by the ranking member of the committee, Senator Danforth, that he does not have an opening statement, but I know that Senator Gorton does, and I will now yield to him.

STATEMENT BY SENATOR GORTON

Senator GORTON. Thank you, Mr. Chairman, both for that introduction and for holding this hearing, so that the committee can move forward to fill this vital position at the Department of Transportation.

The Administrator of the National Highway Traffic Safety Administration has jurisdiction over three important areas with relation to automobiles, to include the administration of fuel economy standards and the provision of information to those purchasing vehicles. The NHTSA Administrator's primary and most vital mission, however, is to improve highway safety in this country.

NHTSA does this by ensuring that vehicles meet the minimum safety standards. This is no small task when one considers that more than 15 million new automobiles and light trucks were sold in 1988, and that, in that year alone, 47,000 people were killed in highway crashes.

Unfortunately, NHTSA has been lax in fulfilling its safety responsibilities during the past eight years. Specifically, the agency has allowed vital safety rulemakings to become bogged down for extended periods of time. A good example of this is the issue of side impact protection. Each year more than 10,000 people are killed in side impact collisions, and another 23,000 people are seriously injured.

NHTSA opened a rulemaking on improved side impact protection in 1979. Ten years later, NHTSA has yet to issue a final rule on this issue, despite the fact that experts agree that there are cost-effective improvements which can be made now.

The travelling public deserves better than this from the leading Federal highway safety agency.

I hope that this nomination will mark the beginning of an effort to revitalize NHTSA.

If General Curry is confirmed as the new Administrator, he will have the opportunity to put this agency back on track. With the right administrator, NHTSA will have the opportunity to save literally thousands of lives every year through timely and prudent action.

General Curry, I encourage you to take advantage of this opportunity and assure you that I will support NHTSA in any way I can to help make our roads safer.

Mr. Chairman, I look forward to our discussion with General Curry to learn his thoughts about NHTSA's future direction and I thank you.

Senator BRYAN. Thank you very much, Senator Gorton.

[The biographical sketch and questions and answers follow:]

DONALD R. BENTLEY, MISSISSIPPI
 THOMAS H. BOYD, KENTUCKY
 J. JAMES BROWN, MISSISSIPPI
 ALBERT B. BROWN, JR., TENNESSEE
 JOHN R. ROCKWELL, JR., WEST VIRGINIA
 LLOYD BENTLEY, TEXAS
 JOHN F. KERRY, MASSACHUSETTS
 JOHN R. BROWN, LOUISIANA
 DONALD R. BENTLEY, MISSISSIPPI
 CHARLES R. BROWN, VIRGINIA
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 WALTER S. MCCORMACK, JR., MISSISSIPPI
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 WALTER S. MCCORMACK, JR., MISSISSIPPI

United States Senate

COMMITTEE ON COMMERCE, SCIENCE,
 AND TRANSPORTATION

WASHINGTON, DC 20510-8125

STATEMENT FOR COMPLETION BY PRESIDENTIAL NOMINEES

(If more space is needed, please use attached REMARKS sheet)

A. BIOGRAPHICAL DATA

1. Name:	Curry	Jerry	R.
	(Last)	(First)	(Other)
Address:	3328 Upper Palace Green	400 Seventh St., S.W.	
	(Current residence)	(Business)	
	Virginia Beach, Va. 23452	Washington, D.C. 20590	
2. Position to which nominated:	Administrator Natl. Hwy. Traffic Safety Admin.	Date of nomination:	
3. Date of birth:	September 7, 1932	Place of birth:	McKeesport, PA.
	(month) (day) (year)		
4. Marital status:	M	Full name of Spouse:	Charlene Elaine Curry
5. Names and ages of children:	Charlein Van Tramp 34	Natasha Curry	26
	Jerry C. Curry 31		
	Toni R. White 28		
6. Education:	Institution	Dates attended	Degrees received
	University of Nebraska	1959-60	BGE June 1960
	Boston University	1967-70	MA June 1970
	Luther Rice Seminary	1977-79	D.Min. June 1979

7. Employment record: List all positions held since college, including the title or description of job, name of employer, location of work, and dates of inclusive employment.

From	To	Name of employer	Address	Type of work
1951	1984	US Army	Pentagon	Infantry

Entered Army as 18-year old private; retired a Major General.

8. Government experience: List any experience in or direct association with Federal, State, or local governments including any advisory, consultative, honorary or other part-time service or positions.

1979-1981 Was Deputy Asst. Secretary of Defense for Public Affairs

9. Political affiliations activities: List all memberships and offices held in or financial contributions and services rendered to all political parties or election committees during the last 10 years.
- Since retirement from the military in 1984, I have been active in Virginia politics. Have helped on local, state and Federal campaigns, assisting others running for office. In 1988, I ran for the U.S. Congress against an incumbent.

10. Memberships: List all memberships and offices held in professional, fraternal, scholarly, civic, charitable, and other organizations.

Past Memberships:

Director, Board of Trade, Washington, D.C.

Counselor, Federal City Council, Washington, D.C.

Director, American Red Cross, Washington, D.C.

Director, USO, Washington, D.C.

Counselor, Army Mutual Aid, Washington, D.C.

Member, National Eagle Scout Association

14. Qualifications: State what, in your opinion, qualifies you to serve in the particular position to which you have been nominated.

Have extensive safety experience in all its facets from my 34 years in the
military, have written numerous safety programs, plans and training guides.

As Commanding General of the U.S. Army Test and Evaluation Command at Aberdeen
Proving Ground, was responsible for evaluating all Army equipment, particularly
vehicles, for defects, flaws and safety standards.

QUESTIONS OF THE MAJORITY AND THE ANSWERS THERETO

QUESTION 1: What is your position on providing agency information, including documents reflecting internal agency deliberations, to Congress if such information is requested in connection with congressional oversight responsibilities?

ANSWER: I subscribe to the pledge Secretary Skinner gave at his confirmation: to make every effort to cooperate with the committees of the Congress, consistent with the need to carry out our duties and responsibilities.

SENATE CONFIRMATION
MAJORITY

QUESTION 2: Please provide a complete list of NHTSA's efforts to comply with 15 U.S.C. 1395, including the status of NHTSA's work with the Research Safety Vehicle. What are your plans for the Research Safety Vehicle program if you are confirmed?

ANSWER: NHTSA pursues an extensive R&D effort, consistent with both its statutory authority and its available resources.

Almost half the research funding supports the collection and analysis of crash data. This provides the basis for much of the work the agency pursues. Further, these data are made available to the entire safety community -- providing the richest motor vehicle and traffic data yet available anywhere in the world.

The remaining research funds are targeted at developing the means to improve safety. Toward this end, NHTSA pursues motor vehicle research, primarily aimed at supporting the regulatory program and behavioral research, which supports its traffic safety programs.

In its time, the RSV program made some important contributions, principally by focusing attention on motor vehicle safety engineering. I believe that the industry should design advanced concept cars while NHTSA can most effectively enhance safety by pursuing research at the subsystem level.

This results in less dramatic changes, but changes that are much more directly incorporated into production vehicles. Improving safety on a component-by-component basis may not be flashy, but it is a practical approach.

SENATE CONFIRMATION
MAJORITY

QUESTION 3: Please provide a complete list of the NHTSA appropriations currently devoted to research in all areas of NHTSA's responsibility. Please list the dollar amounts allocated to each specific area of research underway. State whether you intend to alter the allocation of research funds in any way if you are confirmed.

ANSWER: For the last five years, the agency's contract research program has been relatively stable, the only major exception has been the large amount (\$28.5 million 1986-89) added to support the establishment of an injury control program at the Centers for Disease Control (CDC). Other than this, the research contract program has been funded at approximately \$30 million per year.

Slightly less than half these funds have supported the operation and analysis of the agency's accident data systems. Slightly more than 40 percent of the budget has gone into motor vehicle safety research and the remaining 10 percent has supported traffic safety research.

At this point, I do not anticipate any major reallocation in our research budget. However, I am committed to accelerate the pace of our regulatory program, and if that requires any adjustments in our research program, I am prepared to pursue them.

Table for Question 3

Research Contract Budget 1/
(\$ in thousands)

	Motor Vehicle Research	Highway Safety Research	Data	TOTAL
1986	10782	2707-	15161	28650
‡	38	9	53	
1987	13032	2824	13911	29767
‡	44	9	47	
1988	11983	3050	14000	29033
‡	41	11	48	
1989	13567	4018	14195	31780
‡	43	13	45	
1990	14233	3000	14000	31233
‡	46	10	45	

1/

Excludes CDC funding in 1986-1989 (\$28,480).

Excludes Thomas Jefferson University Hospital earmarking in 1989 (\$2000).

Excludes Jackson Memorial Hospital earmarking in 1990 (\$2000).

SENATE CONFIRMATION
MAJORITY

QUESTION 4: Please provide the total number of NHTSA staff, and the positions of those employees, assigned to work in the area of fuel economy for each year between 1978 and the present. Please state your plans, if you are confirmed, for staff assignments on the fuel economy issue.

ANSWER: Fuel economy and its potential ramifications on our energy independence, carbon dioxide emissions (relating to global warming), the economy, vehicle safety, consumer demand, and the health of the automobile industry is quite important. I have expressed a personal interest in the subject and have followed developments closely.

NHTSA clearly has fewer resources devoted to fuel economy than it did a decade ago. It is also clear that NHTSA can not work in isolation on this issue, and if confirmed I will work closely with the Department of Energy, the Environmental Protection Agency, and other agencies and departments if appropriate, to assure that we used their expertise and arrive at sound, Administration decisions on future fuel economy levels.

Currently, NHTSA has four dedicated fuel economy personnel in its Rulemaking Office, plus a supervisor who spends most of the time in this area. Personnel in the agency's Plans and Policy and Chief Counsel's Offices are also assigned to fuel economy issues, as needed. In the late 1970's, NHTSA had approximately 25 in the Rulemaking Office and 5 Research and Development personnel devoted exclusively to fuel economy issues. These personnel were reassigned in the 1981-82 period during agency reorganization. The present structure and staffing levels have existed since that time.

SENATE CONFIRMATION
MAJORITY

QUESTION 5: The Department of Transportation has opposed the Senate's NHTSA authorization bill, S. 673, in part because the bill imposes time limits on completion of rulemaking on certain safety issues. Please provide NHTSA's current timetable, if any, for rulemaking on each safety issue addressed by the legislation. If you intend to alter that timetable in any way if you are confirmed, please state how you would do so. Include in your answer a description of the involvement of the Office of Management and Budget in NHTSA's regulatory process, and the likely effect, if any, of this involvement on your proposed rulemaking schedule.

ANSWER: Like you, I believe the rulemaking process, in general, takes too long. However, some complex rulemakings take several years from inception to completion because of the time required to conduct research and to allow for meaningful public comments and the analysis thereof. As Administrator, I would do all in my power to reduce this time to 18 months or less.

A significant part of S.673 is concerned with light truck safety. Secretary Skinner and I agree that light duty vehicles - passenger cars as well as pick-up trucks, vans, and sports utility vehicles - should have the maximum safety protection that is feasible. Should I be confirmed, I will insist that automatic occupant protection be proposed for MPV's before the end of this calendar year. I would anticipate final action by the end of next summer.

SENATE CONFIRMATION
MAJORITY

QUESTION 6: Please state the total number of non-voluntary defect recalls required by NHTSA of auto manufacturers for each year from 1970 to the present. Please discuss your view of the role of voluntary recalls by the auto industry, and the extent to which such efforts can substitute for agency required-recalls.

ANSWER: The non-voluntary recalls are listed below together with the voluntary recalls conducted by the auto manufacturers.

Calendar Year	Non-voluntary Recalls	Year Investigation Opened	Voluntary Recalls
1970	0		149
1971	0		207
1972	0		307
1973	0		239
1974	0		231
1975	1	1968	195
1976	2	1969 & 1970	146
1977	1	1972	172
1978	2	1972 & 1973	216
1979	0		206
1980	0		121
1981	1	1977	122
1982	0		118
1983	0 *	1980 *	109
1984	0		138
1985	0		147
1986	0		137
1987	0		177
1988	0		165
1989(to date)	0		178

* NHTSA filed suit to require recall, but court ruled in favor of manufacturer.

Voluntary recalls are not substitutes for non-voluntary recalls, but manufacturers agree to conduct voluntary recalls in most cases because of NHTSA pressure, before the agency orders a recall. It is noteworthy that all of the non-voluntary recalls but one involved investigations begun in 1973 and earlier. All required court action to enforce the order to recall. The agency's interpretation of this is that these early court actions established the bounds of what the courts would consider to be a safety-related defect and manufacturers are less likely since then to resist recalling.

The average time between opening the investigation and securing the recall for the non-voluntary recalls is 5.7 years. In contrast, the time to secure a voluntary recall influenced by an agency investigation is currently 9 months. The agency's investigation approach is to gather as much information on the safety-related defect as quickly as possible in order to secure an early voluntary recall. Since the late 1970s, the investigation time to secure a recall has been reduced from 11 to 9 months.

SENATE CONFIRMATION
MAJORITY

QUESTION 7: Please discuss the philosophy you intend to follow, if you are confirmed, with respect to the agency's interaction with the auto industry it regulates. In particular, please discuss your view of the role of voluntary action by auto manufacturers in the area of safety and fuel economy. Do you plan to encourage, and defer to, voluntary action? If so, how do you plan to insure that the agency properly carries out its regulatory responsibility, and does not unduly defer to the industry?

ANSWER: My views of the agency's relations with the auto industry are the same as they are in terms of relations with any group — suppliers, dealers, consumer groups, insurance companies, etc. I believe that we should all share a common goal — to reduce highway casualties — although we may have honest differences of opinion on how to achieve that goal. I will seek the views of all such groups and will work with them to improve highway safety. Of course, I recognize the "arm's length" requirement that must be observed with not only the regulated industry but with all parties during the conduct of a regulatory proceeding.

I certainly plan to encourage voluntary safety and fuel economy improvements from the regulated industries, be they car companies, lighting manufacturers, child safety seat firms, heavy truck manufacturers, or any other group NHTSA regulates. Voluntary action often results in safety improvements much faster than regulation can. At the same time, I will not hesitate to use the regulatory authority available to the agency whenever it is necessary. Thus, I would encourage, but not defer to, industry voluntary action.

SENATE CONFIRMATION
MAJORITY

QUESTION 8: What is NHTSA's current policy with respect to information submitted by parties outside NHTSA for inclusion in a rulemaking docket? Are all materials submitted included in the docket? If not, please describe the process, if any, for determining which materials are included. If confirmed, do you have any plans to change or institute any process in this area?

ANSWER: As a general matter, I understand that documents submitted by outside parties are routinely entered into the dockets identified by the parties. I would be willing to examine the docket procedures if it should appear that problems have arisen with them.

SENATE CONFIRMATION
MAJORITY

QUESTION 9: S. 673, which has passed the Senate, authorizes funding for a program of airbag education. Please state how you would propose to utilize that funding should the legislation be enacted. Additionally, please state whether you intend to implement any public education program regarding airbags absent the enactment of this legislation.

ANSWER: I am already committed to a vigorous air bag education program. We are planning to use the crash dummy characters Vince and Larry to explain how air bags and safety belts work together. Also we are developing a new state grant program to encourage states to implement more innovative strategies that explain and promote correct use of automatic safety belts and air bags.

SENATE CONFIRMATION
MAJORITY

QUESTION 10: Please list all efforts currently underway at NHTSA to comply with its responsibilities to provide consumer information about vehicles, as required by 15 U.S.C. 1941 et seq. Do you have any plans to increase or decrease the agency's current efforts in this area?

ANSWER: NHTSA's chief vehicle safety consumer information program is its New Car Assessment Program (NCAP). I believe that this is a worthwhile consumer-related activity and I will take action to provide the information to the public in a more meaningful, easier to comprehend fashion, including revised agency news releases and graphic presentation of data. I would like to expand this program and will work to do so, consistent with fiscal responsibility.

I firmly believe that NHTSA can and must improve its outreach activities -- to the Congress, the public, and consumer groups in particular. As part of this effort, if confirmed I will appoint a special consumer liaison to be housed in the agency's Public and Consumer Affairs Office. I believe the new heads of the Office of Public Affairs and the Consumer Affairs Division, as well as the consumer group liaison and, for the first time in over a decade, the appoint of a congressional liaison assigned to work in NHTSA, will provide dynamic leadership in this important area.

As to specific actions, NHTSA has activities in the following areas:

Consumer brochures -- A series of easy-to-read papers on a variety of safety and other vehicle issues, updated annually and available free of charge from the Government's consumer center in Pueblo, CO, in addition to NHTSA.

Information provided on theft rates of new vehicles and which vehicles are subject to the agency's parts-marking program and which have original equipment anti-theft devices.

Tire quality grading information updated semi-annually.

A recent survey of manufacturers concerning bumper performance.

An expansion of NCAP to include other size dummies (small adults and children) and to rate the ease of use of child safety seats.

A survey of insurance companies to determine the effects of vehicle attributes on insurance premiums.

SENATE CONFIRMATION
MAJORITY

QUESTION 11: There appears to be agreement among experts that airbag-equipped vehicles decrease the risk of fatality in some accidents as compared to vehicles equipped with automatic seat belts. Given this agreement, would you support a requirement that all passenger vehicles be equipped with airbags? If not, why not? Would you support some type of incentive program to encourage manufacturers to install airbags instead of automatic seat belts?

ANSWER: I believe the agency's existing rule, which already provides incentives for airbag production, provides the proper regulatory framework for automatic occupant protection. The framers of the statute believed, as do I, that motor vehicle safety is best served by safety standards being specified in performance, not design, terms. This allows constant experimentation and innovation to find the most cost-effective means of providing the required protection. Given the relative newness of automatic restraints in general, particularly airbags, it will take at least another year to acquire sufficient crash data to evaluate. I am pleased to see the growing number of new airbag-equipped cars, accounting for more than 30 percent of MY 1990 vehicles and expected to double in the next 2-3 years.

SENATE CONFIRMATION
SENATOR EXON

QUESTION 1: The latest odometer regulation, 49 CFR Part 580, effectively requires that when a power-of-attorney is used to record odometer disclosure information, the car must be retitled in the state in which the power-of-attorney was issued. Concern has been expressed that this requirement is not only unnecessary but also disruptive to used car commerce. In your judgment, does the Truth in Mileage Act of 1986 require that a car be retitled in the state in which a power-of-attorney was issued?

ANSWER: It is my understanding that the rulemaking under the Truth in Mileage Act requires the agency to make a number of judgments. I intend to make sure that these judgments are fully consistent with the purposes of the Act. To that end, I will have my chief counsel review the matter thoroughly before we take any further rulemaking action under the Act.

SENATE CONFIRMATION
SENATOR EXON

QUESTION 2: On October 3, 1989, I sent you a letter addressing the issue and have provided the Committee with a copy of that letter for reference. In the letter, I outlined procedures which I believe can avoid problems to used car commerce while continuing to achieve the goals of the Truth in Mileage Act. What are your views on this approach?

ANSWER: Procedures similar to those outlined in your October 3, 1989, letter have been submitted in petitions for reconsideration of the rule issued in August. The agency is currently reviewing those petitions; until it completes its review and issues a final notice, it would be inappropriate for me to discuss the feasibility of those procedures. A final notice should be published in the near future.

SENATE CONFIRMATION
SENATOR EXON

QUESTION 3: If you feel that my approach to this problem does not constitute a viable solution, could you provide me with a description of how you intend to resolve this matter?

ANSWER: If actual problems develop, or if the States provide evidence that would assure the retention of power of attorney forms, further rulemaking might be advisable. Please be assured that, should I be confirmed, I will ensure that the agency fully addresses the issues raised by the pending petitions for reconsideration.

SENATE CONFIRMATION
SENATOR BRYAN

QUESTION 1: Please describe your relationship to activities of the Christian Broadcasting Network, including information relating to your relationship with Mr. Pat Robertson (Chairman of the Board and Chief Executive Officer), Mr. Bob Slosser (President of CBN University, and Mr. Herbert Titus (Dean of the CBN College of Law).

ANSWER: Mr. Pat Robertson recruited me to be President of the National Perspectives Institute (NPI). I was president of NPI, a non-profit think tank that published papers on national policy, from February of 1985 until September of 1986.

Mr. Pat Robertson and Mr. Bob Slosser were on the Board of Directors of NPI until they resigned in April of 1986. The connection between the Christian Broadcasting Network and NPI was that Mr. Robertson served on the Board of both organizations.

SENATE CONFIRMATION
SENATOR BRYAN

QUESTION 2: Please describe your relationship to activities of the National Legal Foundation, including information relating to your relationship with Mr. Robert Skulrood (Executive Director of The National Legal Foundation).

ANSWER: At Mr. Robertson's request, from October of 1985 until May of 1986 I was, concurrent with my duties in NPI, President of The Freedom Council (TFC). TFC was a non-profit organization formed to educate and motivate citizens to take part in the Country's political process.

Mr. Robert Skulrood and Mr. Herbert Titus were on the Board of Directors of TFC. The National Legal Foundation, of which Mr. Skulrood was Executive Director, was a subordinate organization of TFC.

The connection between CBN and TFC was that Mr. Robertson had founded both organizations. He was not on the Board of Directors of TFC during the period of time that I was president.

SENATE CONFIRMATION
SENATOR DANFORTH

QUESTION 1: Side-Impact Improvements - Each year, 10,000 Americans are killed in side impact crashes. In 1979, NHTSA began rulemaking to improve the side-impact standard for passenger cars and to extend that standard to light trucks. NHTSA suspended this rulemaking in 1982. Six years later, the agency issued a notice of proposed rulemaking for improving side-impact. No final rule has been issued, even though the comment period ended a year ago. This week 19 members of the Commerce Committee wrote Secretary Skinner requesting action on side impact. When will NHTSA issue a final rule on side impact?

ANSWER:

I have read your recent letter and agree that side impact crashes cause unacceptable injuries and loss of life. NHTSA is currently in the rulemaking process concerning side impact and I've been told by the staff that there have been significant public comments to the Agency's Notice of Proposed Rulemaking. While it is improper for me to comment on the ultimate resolution of those issues during the rulemaking process, I assure you that, should I be confirmed, I will seek their earliest possible resolution, but no later than next summer.

SENATE CONFIRMATION
SENATOR DANFORTH

QUESTION 2: Multi-Purpose Vehicle (MPV) Safety - As of September 1, all new passenger cars must be equipped with a driver's side air bag or automatic seat belts. NHTSA seems to think air bags in passenger cars are a good idea because it recently issued a press release praising air bags. This protection is not required for small trucks, minivans, and jeep-type utility vehicles, even though these vehicles make up 30 percent of the passenger vehicle market. When will you extend this protection to MPV owners?

When will you issue final rules on these additional protections?

- a. Minimum roof crush resistance has been required for passenger cars since 1971. No standard applies to MPVs.
- b. As of 1986, all passenger cars are required to have a high-mounted rear stoplamp. MPVs are exempt from this requirement.
- c. MPVs have no side impact standard.
- d. Unlike cars, jeep-type vehicles and minivans are not yet required to have three point belts in their rear seats.
- e. Many light trucks, especially sport utility models such as the Suzuki Samuri, are prone to roll-over. These vehicles have no minimum stability standard.

The current status on other issues is as follows:

- a. Roof crush resistance -- A Notice of Proposed Rulemaking (NPRM) should be issued this year, and a final decision should be forthcoming in the summer.
- b. High-mounted stop lamp -- An NPRM should be issued by early Spring with a final decision by next Fall.
- c. Side impact protection -- An NPRM should be issued by the end of this year with a final decision by late next year.
- d. Rear seat shoulder belts -- A final rule should be issued next month.

- e. Rollover -- Vehicle rollover is a serious issue which merits prompt NHTSA action, not only for light trucks, but for passenger cars as well, since the total number of rollover-related fatalities is nearly twice as high for passenger cars as it is for light trucks. Research is not as far along as I wish it were. Should I be confirmed, I will quickly move to bring it to a successful conclusion. I am unable to give you a firm date at this time. Possibly rulemaking can begin by the end of next year.

I also appreciate and share the Committee's concern over the length of time it has taken to get where we are on improved side impact protection. As Administrator, I would seek to make a decision on this issue in the Summer of 1990.

The bill also would require rulemaking on several other issues, from bumper standards to child booster seats to head impact protection. While I am not familiar with all these items, I will carefully review the issues involved and am willing to commit to make decisions in all these areas within 6 months.

Lastly, you asked about NHTSA's relation to OMB. As you know, all NHTSA NPRM's and final rules must, by Presidential Executive Order, be reviewed by OMB. On average, OMB has taken slightly over a month to review each of NHTSA's rulemakings, although in certain instances these reviews have taken 9 months or longer. I understand that OMB has recently announced it will not "sit on" agency rulemakings, but instead will take timely action. As Administrator, I will work closely with OMB to assure that delays do not occur. This includes the offer of briefings on upcoming rulemakings, so that OMB can have advance knowledge of the substance of our activities prior to receiving the actual documents to review.

SENATE CONFIRMATION
SENATOR DANFORTH

QUESTION 3: Additional Safety Issues - When can we expect NHTSA to issue rules addressing these safety and consumer issues?

- a. Increased safety of child booster seats.
- b. Return to the 1982 five mile per hour bumper standard.
- c. Minimizing pedestrian injuries caused by vehicle components.
- d. Reduction of head injuries caused by the interior components of a vehicle.

ANSWER:

- a. Increased safety of child booster seats -- NHTSA recently conducted research to test whether booster seats are causing abdominal injuries to children. Research concluded that such was not the case. But it also concluded that there may be problems with ejection or structural damage to the seats. As a result, it is clear that NHTSA needs to undertake regulatory action to improve the safety of all child restraints, not just booster seats. Should I be confirmed, I will move to make that happen next year.
- b. Bumper standard -- NHTSA currently has before it a petition to raise the bumper standard to 5 mph. Should I be quickly confirmed, I will review that issue and make a decision to grant or deny the petition by the end of this calendar year.
- c. Pedestrian injuries -- The staff tells me that research regarding minimizing pedestrian injuries caused by contact with vehicle hoods is nearing completion. If the research indicates the possibility of reducing these injuries, the agency should issue an NPRM before the summer of 1990.
- d. Head injuries -- The staff tells me that NHTSA issued an Advance Notice of Proposed Rulemaking in August 1988 seeking comments on means to reduce head injuries caused by contact with interior components. The public comments indicated the need for further research in this area. While I have not formed an opinion on whether further research is necessary, I would be prepared to make such a decision by year's end.

SENATE CONFIRMATION
SENATOR DANFORTH

QUESTION 4: Implementing the Drunk Driving Prevention Act - Last Year, the Drunk Driving Prevention Act of 1988, which would give states incentives to fight drunk driving with among other things, administrative per se license suspension, open container laws, and the confiscation of the license plates and registration of repeat drunk driving offenders. Congress has been working to get his program started. The Congress included a \$4 million appropriation for it for Fiscal Year (FY) 1990.

- a. What are NHTSA's plans to implement Congress' direction to get this program up and running?
- b. Will the Administration seek an appropriation for this program in FY 1991?

ANSWER:

- a. The Section 410 Alcohol Incentive Grant program is a helpful follow-on to the Section 408 program. NHTSA is in the final stages of writing the regulation under which the grants will be awarded. That regulation will be published before the end of this calendar year. Shortly after its publication, NHTSA expects to begin receiving grant applications. Currently, we are familiarizing the States with the provisions of the law through Regional Offices, and through highway safety meetings and workshops held with the States and public interest organizations. During the late spring of 1990 NHTSA will conduct a national meeting on the 408 and 410 programs to provide a forum for discussing the experience of the States in qualifying for and implementing alcohol incentive grants, including effectiveness evaluation of the 408 program. The meeting will also be used to reinforce information provided to the States on how to develop comprehensive applications and implementation plans for 408 and 410 grants.
- b. Yes, the Administration will seek an appropriation for the program in 1991.

Senator BRYAN. We are delighted this morning to welcome to the committee the senior Senator from the State of Virginia, Senator John Warner.

Senator, it is a pleasure to have you before us.

STATEMENT OF HON. JOHN WARNER, U.S. SENATOR FROM VIRGINIA

Senator WARNER. Thank you, Mr. Chairman, and members of the committee.

In my 11 years in the Senate I do not know that I have ever witnessed a scene quite like this one this morning. On my right is my distinguished colleague from the House of Representatives, Congressman Pickett, who, at one time, was an opponent of the man on my left. And given those circumstances, Mr. Chairman, I think the Senate ought to yield at this point, and allow Mr. Pickett to go first, to express our appreciation for his joining us this morning.

Senator BRYAN. Senator we will do that.

Congressman Pickett, it is a pleasure to have you before the committee as well.

STATEMENT OF HON. OWEN B. PICKETT, U.S. REPRESENTATIVE FROM VIRGINIA

Mr. PICKETT. Thank you, Mr. Chairman. And Senator Warner, thank you very much.

I am very pleased, Mr. Chairman, and members of the committee, to be here this morning and have the opportunity to appear on behalf of General Jerry Curry.

I know that many members of the committee are familiar with General Curry from his days as commander of the Military District of Washington. That assignment was part of a 34-year military career in which General Curry gained experience in management, personnel, engineering, international relations, public affairs, and foreign policy.

I would also note briefly that General Curry's career included commanding the U.S. Army Test and Evaluation Center in Aberdeen, Maryland, which, I think, in line with what Senator Gorton has just said, is going to be excellent experience in his position at the National Highway Traffic Safety Administration.

Mr. Chairman, and members, I can also tell you a little something about Jerry Curry on a personal basis. As has been noted, last year he was my Republican opponent for the House of Representatives in the 2d Congressional District of Virginia. General Curry ran a tough and spirited campaign, but one that was intended to focus on issue differences and really inform the electorate. We are still friends.

In making this nomination, Mr. Chairman, and members, I think the President has sought an experienced leader who will move the agency's agenda forward with clear-sighted vision and vigor. It will not be an easy task, as we all recognize, but I think that General Jerry Curry has met big challenges in the past and he is equal to this one.

And I thank you for this opportunity, Mr. Chairman.

Senator BRYAN. Thank you very much, Congressman Pickett. We invite you to remain. Recognizing you have a busy schedule, whenever you need to excuse yourself, please feel free to do so.

Now we will hear from our colleague, the senior Senator from Virginia.

Senator Warner.

Senator WARNER. I thank you, Mr. Chairman, and would just say to my good friend, I am very respectful of his appearance here this morning. We pride ourselves in Virginia to have a good bipartisan delegation when it comes to issues such as this. And this is a manifestation of that character.

The administration of the National Highway Safety Administration which General Curry will take over, is charged with the important responsibility to ensure that the vehicles that travel our Nation's highways are as safe as possible. That has been noted in the statements earlier by the chairman and the distinguished Mr. Gorton from Washington.

We are indeed fortunate that the President has nominated a person of General Curry's qualifications and experience to fill this position. I know the committee has the General's resume, but I would like to take a moment to highlight several of these points, as I have been privileged to have a friendship and a professional relationship with him for several years.

He began his career in the Army as a private, and retired 34 years later at the rank of major general. During that time he held positions involving research and development, combat, command, intelligence, logistics, budgeting, and aviation.

Before retiring, he was Deputy Commanding General of the Fifth Corps, Frankfurt, Germany. General Curry served as the Pentagon spokesman and Deputy Assistant Secretary of Defense for Public Affairs. After that, he commanded the U.S. Army Military District of Washington where, among other duties, he was responsible for the White House ceremonies. He also served as commanding general of the U.S. Army Test and Evaluation Command that includes White Sands Missile Range in New Mexico.

Mr. Chairman, and members of the committee, the challenges facing the Administrator are great. General Curry's career speaks for itself. Much of his career in the service concerned military transportation, aviation and civilian safety.

I am confident that General Curry will carry out the administrator's responsibilities with the same thoroughness that he performed his many responsibilities in the United States Army during his lengthy and distinguished career.

He is accompanied here today by his lovely wife, Charlene, and I wish to take a moment to join with the chairman and members of the committee in recognizing Mrs. Curry.

Mr. Chairman, this is a fine American. The President was very wise in his choice, and I am confident that in the years hence, he will serve well and appear before this committee, and hopefully reverse the past, which Senator Gorton pointed out, with regard to the previous work of this administration.

I think General Curry will turn that around and shape it up.

Thank you.

Senator BRYAN. Senator, we appreciate your testimony. You are always welcome before this committee, and I know you, too, have a busy schedule. If you need to excuse yourself, I know that General Curry and his family will understand.

General Curry, let me extend an invitation and a welcome to you on behalf of the committee. If there are other family members here this morning, in addition to your wife, that you would like to introduce, let me extend that opportunity to you, before you begin your presentation.

STATEMENT OF JERRY R. CURRY

General CURRY. It is just my wife, Charlene.

Senator BRYAN. General, you may proceed.

General CURRY. Mr. Chairman, I have a short statement; I can either read it, if you would like, or I can just submit it for the record.

Senator BRYAN. Why do you not share it with us, if you would please, General.

General CURRY. Mr. Chairman, distinguished members of the Senate committee—

Senator BRYAN. General, could you pull that microphone a little closer to you.

General CURRY. It is an honor to appear before you concerning my nomination as Administrator of the National Highway Traffic Safety Administration.

I want to thank you and the members of the Committee for the opportunity to visit with you individually. Those were useful and productive discussions for me, and I trust that they will mark the beginning of a good working relationship with your Committee and the Congress.

I am particularly honored by this nomination, not just because I have a strong interest in saving lives but also because of my 34 years of military service, much of which concerned motor vehicle, aviation and citizen safety, and as a result safety is a subject with which I am comfortable and, should I be confirmed, an area where I believe I can make a significant contribution to the Nation.

Realizing that NHTSA has an impact on the every day lives of most Americans, President Bush and Secretary of Transportation Skinner have recently charged NHTSA with the following:

1. Raise the national highway safety consciousness with the goal of increasing safety belt usage to 70 percent by 1992.
2. Decrease the number and percent of alcohol and drug-related highway accidents and fatalities by reducing the probability of crashes.
3. Decrease the highway fatality rate from 2.4 to 2.2 deaths per 100 million miles of travel by 1992 by reducing crash injuries and increasing crash survival rates.

Now, these are challenging but not impossible goals, and I look forward to helping accomplish them and I would appreciate the help of this Committee to do the same.

Should I be confirmed as Administrator, I will do all in my power to reduce casualties on our highways. Every life is precious, even one death is too many, and it seems to me that we should

place our priorities on increasing the use of safety belts, air bags, child safety seats, and motorcycle helmets, decreasing alcohol and drug-related crashes, maintaining safe speeds, making all drivers and motor vehicles as safe as they can be, and getting unsafe vehicles and drivers off the road.

Now, at the same time, we cannot neglect the less dramatic. There are important environmental goals of clean air and improving vehicle fuel efficiency. That must be addressed as part of a broad policy.

Our enforcement efforts must continue to assure that manufacturers comply with safety standards and remedy safety defects, and we must also continue our consumer protection efforts to reduce odometer fraud and vehicle theft. Not only do these programs save lives, but they do improve the quality of our lives.

Like Secretary Skinner, I believe that the Federal Government should regulate only where the benefits of regulation justify the added burden, yet I recognize that self-regulation by the automobile industry is not always an acceptable substitute for Federal vehicle safety regulation.

It requires new levels of public awareness, changes in drivers' attitudes and behavior and active citizen involvement. It requires partnership and cooperation with state and local governments, the health community, law enforcement agencies, and the private sector.

Now, certainly the criteria and procedures we use to establish Federal motor vehicle safety standards have been tested and validated by time and experience, and when these rules are followed in spirit and letter, they result in responsible and beneficial governance, but if in applying these criteria NHTSA determines that there is a need to establish, amend or revoke a standard, as Administrator I will not hesitate to act accordingly.

In the short time that I have been associated with NHTSA, I have been most favorably impressed with the competence, professionalism and dedication of its career personnel. They are outstanding in every respect.

But one area where I have been disappointed is in the length of time it takes to complete a rulemaking action—2 years, on the average, from start to finish. A few rules have even been in the works for much longer, such as side impact. Now, while there are often reasonable explanations for these delays, I believe the agency's timeliness can be improved.

I am convinced that speed, along with quality of process and procedure can be complementary. They need not be enemies. Should I be confirmed, one of my priorities will be to speed up the agency's rulemaking process so that the public may benefit as quickly as possible from these actions.

The need to place the highest priority on preventing crashes and their resulting deaths and injuries is clear. If confirmed, I will carefully review all areas of NHTSA's safety responsibilities. I have much to learn, but I assure you that I will take whatever steps are necessary to see that the National Highway Traffic Safety Administration is managed effectively and efficiently.

The President and Secretary Skinner have set challenging goals for the agency, and I look forward to helping get the job done.

Finally, Mr. Chairman, for some years NHTSA has been a controversial agency. Some controversy is inevitable, because the agency's activities impact on lives as well as on some of our most important economic factors, but if confirmed, I would like my tenure to be characterized less by controversy and more by agreement on how together we can save more American lives.

I thank you, sir, and I await your questions.

Senator BRYAN. Thank you, General Curry. We will begin our round of questions. I would suggest that we confine ourselves to five minutes. If we need an additional round, then we will take whatever time we need, and I know that Senator Danforth is managing a measure on the floor this morning so he may not be able to remain with us the full time.

Senator DANFORTH. Thank you very much, Mr. Chairman. I appreciate it.

General, we have had many dealings with NHTSA during the time that I have been on this Committee and most of them have been, from my standpoint, most unsatisfactory.

Typically, NHTSA administrators have appeared before the Committee and we have hounded them and berated them and complained about the fact that they are not getting out their rules, that they're pulling their punches, that they're back-tracking.

It has seemed to us in the past that oftentimes NHTSA has been most subservient to OMB and to ideological positions which seem to say that, why should safety stand in the way of profit?

My hope would be that you would be absolutely committed to safety and that you would view your mission as one of promoting safety and not being a person who is an ideologue.

But let me just ask you whether you have any ideological hang-ups, whether you have any reservations at all about promoting safety in an effective way, whether you believe that your position as NHTSA Administrator would be one of being a forceful advocate and a mover in the area of safety, or whether instead you have any ideological reservations which would mean that the role of NHTSA would revert to what it was a few years ago and, instead of promoting safety, your job would be to go slow on safety measures in the name of some other purpose?

General CURRY. Sir, I have heard your comments privately and publicly. They have been consistent and to the point, and I bring nothing of an ideological nature to this job.

To me, this job has a very narrow focus. That focus is saving lives. It seems to me that in that area, NHTSA must put all of its energies and make all of its direction in that area.

I do not believe that this is the agency, nor the position, nor, I must say candidly, am I the person, to approach this job in any other way than straight down the line on safety and saving the lives of Americans on highways, and the ideology and other considerations will have to take second place. Our focus is very clear and we must be an honest broker on safety.

Senator DANFORTH. I am going to now ask you the hardest question that I can ask a nominee. Let us suppose that you were doing your job and you were trying to save lives, and you were deeply committed to what you were doing, and let us suppose that the Administration takes an absolutely opposite point of view and says

that no, NHTSA's going too far and doing too much. Would you, if necessary, be willing to resign on a point of principle?

General CURRY. I should hope that that would never be the case.

Senator DANFORTH. I would, too.

General CURRY. I intend to work fully within the Administration and with the guidelines of the President. I cannot foresee an example where such an extreme case would come, but I have been to that brink many times in combat and in my professional career serving this Nation, and it is too late for me shrink from such a position if that should come, though I do not believe it would.

Senator DANFORTH. Thank you very much. Just one final question relating to so-called multipurpose vehicles—vans, light trucks. The safety rules that apply to automobiles do not apply to small trucks and to many vans, and to jeep-type utility vehicles.

The rule relating to passive restraints does not apply to them, nor does minimum roof crash protection, the high-mounted rear lights, the three-point belts in rear seats. What plans do you have, if any, relating to these vehicles, particularly relating to passive restraints but also to the other areas?

General CURRY. All of these are, I believe, not only concerns of safety but they very directly relate to the first question that you asked. We are going to have to extend very clearly the safety positions to multipurpose vehicles, sometimes called light trucks, mini-vans, that sort of thing. That is going to have to be done.

Should I be confirmed, some of those will happen, the majority will happen this calendar year, in fact. I would expect all of those things that you have mentioned would have been acted on by the agency by this time next year.

Senator DANFORTH. Thank you very much. Thank you, Mr. Chairman.

Senator BRYAN. Thank you very much, Senator Danforth. Let me pick up where Senator Danforth left off. Both, as you say, in private and public discussions with a number of members of the Committee, I am sure, General, you are aware of the bipartisan frustration in terms of setting these rulemaking standards.

Senator Gorton pointed out in his opening statement it has been 10 years in the making for a side impact standard. We sent a man to the Moon in a shorter period of time than that.

As a military officer, you know that in the aftermath of World War II, from design until flight, we were able to put the first military jet aircraft into the skies in 18 months. I was pleased to note in your response to the pre-hearing questions that you indicated that you would adhere to an 18 month or less rulemaking standard, and I applaud that kind of response. We are hopeful that you will be able to carry that out as you have indicated.

As you know, the legislation which has been processed by this Committee and in which a number of members of this Committee have had a longstanding interest mandates some standards and the time for competition of certain rulemakings. Among those are, in addition to the side impact protection, multi-purpose vehicles which Senator Danforth just alluded to, bumper standards, child booster seats, head injury protection, prevention of pedestrian injuries, lap and shoulder belts in rear seats, among others. Is it your testimony today before this committee that, insofar as humanly

possible, we might see an 18-month period of time with respect to those standards as well as this long-neglected side impact standard?

General CURRY. Yes, sir. Should I be confirmed as Administrator, that will be a definite goal. I deliberately put 18 months in, because I believe we can make 18 months and I will do all in my power to make that happen.

Senator BRYAN. You will note in the legislation that the Senate expresses, and has done so on several prior occasions, its concerns in a number of safety-related areas, among those the list that I just read to you.

Do you agree that those are concerns that ought to be among the top priorities in the agency? If you do, we would appreciate your acknowledgment. If you disagree, we would like to know where you disagree. If you have other safety concerns which you think ought to receive a higher priority than those which we have outlined in the bill, we would like to know what they are.

General CURRY. It seems to me that these safety concerns are not things that just suddenly have sprung up. It is very clear they have been well thought out, well reasoned, well researched.

Certainly they have been written about and talked about in various publications. Many safety experts have come up with the same, the short time I have been with NHTSA in talking to the professional staff there and those people who have worked for many years in these directions.

They all, I believe, agree that these really are the ones at the top of the list and they are the priority ones. Certainly, they are the ones that will be receiving my closest attention, should I be confirmed as Administrator.

Senator BRYAN. As you know, this committee also has worked and is working on corporate average fuel economy standards first enacted in 1975. Let me have your view with respect to the proposed legislation that would increase those standards to 40 miles per gallon in the year 2001.

General CURRY. I have spent some time with Secretary Skinner and others in the Department of Transportation. I have personally been over to the Department of Energy to visit on the subject. I have been over to the Environmental Protection Agency.

Secretary Skinner is proposing that we very quickly bring together an interagency group in which the Department of Transportation and NHTSA along with the Department of Energy and the Environmental Protection agency sit down and hammer out at some length a couple of things. One of them is the numbers that we would use for 1995 or for the year 2000 for CAFE.

Also, should the formula itself be changed in some way, we will be looking at that also, and the time limit that has been set, I believe, is something like 6 months.

Senator BRYAN. General, we hope you will be an advocate for improved fuel economy standards—one way that we can clean up our air, ameliorate to some extent our dependency upon foreign oil and also to help ease our trade deficit, a large part of which is foreign oil.

Before yielding my time to the ranking member of the subcommittee, Senator Gorton, I wanted to give you an opportunity to tell

us about your employment relationships after you left the armed services.

General CURRY. I retired in December 1984, and in 1985 Mr. Pat Robertson approached me, after my serving the 34 years in the military, to be president of the National Perspectives Institute. I was president of the National Perspectives Institute, which is a nonprofit think tank that published papers on national policy, from February 1985 until September 1986.

Mr. Pat Robertson and Mr. Bob Schlosser were on the board of directors of the National Perspectives until they resigned in April 1986, and the connection between the Christian Broadcasting Network and the National Perspectives Institute was that Mr. Robertson served on the board of both organizations.

I also for 6 month concurrently with that for about seven months at Mr. Robertson's request acted as president of the Freedom Council, which was a nonprofit organization, a forum to educate and motivate citizens to take part in the country's political process.

The connection between the Christian Broadcasting Network, Pat Robertson and the Freedom Council was that Mr. Robertson had founded both organizations, but he was not on the board of directors of the Freedom Council during the period of time that I was president.

Upon completion of this, I became the vice president for marketing and sales for Systems Management American Corporation, which is an all-minority-owned computer systems integration company with its headquarters in Norfolk, Virginia. About that time I ran for Congress against Congressman Pickett, who you saw here in 1988 upon completion of the campaign and Congressman Pickett won. I think that is why he was so glad to come this morning.

I had the intention to be nominated by President Bush for this position and have been acting as a consultant for several months to the administration.

Senator BRYAN. I see my time is now up. I will now yield to Senator Gorton.

Senator GORTON. General Curry, in 1974 NHTSA issued a standard requiring that automobile bumpers be able to withstand collisions of up to five miles per hour. In 1982, eight years later, NHTSA reduced the bumper standard to two and a half miles per hour based on its calculation that the savings to customers through lower vehicle price and fuel costs would be greater than the additional repair costs.

Since the rollback, there has been virtually no evidence that consumers have saved any significant amount as a result of the lighter bumpers.

Meanwhile, tests by the Insurance Institute for Highway Safety have shown that 1989 model cars sustained, in five mile an hour crashes, damages ranging from \$400 to more than \$3,000. Given the fact that lowering the bumper standard has cost consumers rather than benefitted them, is it time seriously to consider promptly going back to a five mile an hour standard?

General CURRY. I think that there is a petition right now before NHTSA on the question of bumper standards and that it is being seriously looked at. So, since the petition is in process, my remarks must be limited.

I also understand that there are tradeoffs, some of which you have mentioned, between protective capability of a bumper cost weight. The law requires NHTSA to balance all of these factors. And, if I am confirmed, I will be happy to look into that and to do exactly that and report back.

Senator GORTON. Thank you.

According to NHTSA's studies, more than 7,000 pedestrians are killed and an estimated 110,000 injured in the United States every year in highway crashes. Although NHTSA has done considerable research in this area since 1981, it has failed to conduct any rule-making on the basis of this research.

Given the number of lives that are lost and the thousands of pedestrians who are injured in automobile accidents, would you consider moving forward with a rulemaking in this field?

General CURRY. As a result of our conversations, I have, in fact, inquired as to what our progress has been, and I have been told that NHTSA is in the final stages of examining the findings on pedestrians, and that they are prepared to determine when a rule-making can be initiated on such things as head injuries, and I would expect that should I be confirmed, we will have a decision on that within the next six months.

Senator GORTON. And you want to move forward rapidly?

General CURRY. I do want to move forward on this.

Senator GORTON. I think that probably answers my question on head injuries as well, though I would incorporate in that head injuries, not just for pedestrians, but particularly those due to side impact crashes.

Does your answer to my previous question apply to that as well?

General CURRY. It does apply. It is clear that we have not paid as much attention as we should have to pedestrians, and it is an area I will be looking into.

Senator GORTON. Senator Danforth asked this question one way. I think I will ask it in a slightly different way.

Have you sought this position and have you accepted this position with a view toward the fact that highway safety is a vitally important issue to the people of the United States, and do you intend to aggressively pursue your duties and your statutory powers in doing the best you can to assure that safety?

General CURRY. I can say yes to all of that. If you will fault me probably in the future, it will be for doing too much, not too little.

Senator GORTON. That will be a welcome change, General.

Thank you, Mr. Chairman.

Senator BRYAN. Thank you very much, Senator Gorton.

Senator Danforth.

Senator DANFORTH. No further questions, Mr. Chairman.

Senator BRYAN. General, we have admired your military career. Any person who enters the armed services as a buck private, as an E-1, who attains flag rank with two stars as you did, that is an impressive performance, and we are not unmindful of the circumstances that occasioned your advent into the military service in the early 1950s.

You have had more experience than some of the nominees who have come before this committee. You have been with the agency since March, as I recall, as a consultant. You understand its oper-

ation. You understand its personnel. You have had an opportunity to visit with members of this committee privately on a number of occasions.

You understand that there is a bipartisan concern that the agency has been lethargic in the past. Some of us would go so far as to say that it has been derelict in terms of its performance to the public.

We think anybody who has commanded divisions in the military can bring the same kind of leadership, if you are confirmed, to this agency. On the next occasion that we have to meet with you as members of this committee, you might please your friends and astonish your critics by having rulemaking in force and by proving to us that your administration is going to be a vast departure from that which we have had over the past 8 years.

And, if you are confirmed, I can assure you that each of us on this committee will work with you in supporting the mission and goal of the agency and wish you personally well.

Senator BRYAN. I know Senator McCain was briefly here with us, but had to go to another meeting, and Senator Pressler was also with us and had to go to another meeting as well.

Since there is nothing further pending before the committee, the committee will stand in recess subject to the call of the Chairman. Thank you very much.

[Whereupon, at 10:40 a.m., the committee adjourned, subject to the call of the Chair.]

NOMINATION—OCTOBER

TUESDAY, OCTOBER 24, 1989

U.S. SENATE,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
Washington, DC.

The committee met, pursuant to notice, at 2 p.m., in room SR-253, Russell Senate Office Building, Hon. John F. Kerry presiding.

Staff members assigned to this hearing: Mike Nussman and Becky Kojm, professional staff members; and Ruth Johnson, minority professional staff member.

OPENING STATEMENT BY SENATOR KERRY

Senator KERRY. This hearing of the full Commerce Committee will come to order.

I am delighted to welcome Jennifer Joy Wilson for this nomination hearing. I appreciate Senator Robb being here. I know he wants to make an introduction, and it is my understanding that Senator Warner may also join us shortly.

I apologize ahead of time for not waiting for Senator Warner. Normally I would do that, but unfortunately Senator Mitchell has just informed me that I must be on the floor to manage the Mutual Legal Assistance Treaties at 3:00, and therefore we are in a bit of a time crunch here, but I appreciate your understanding that. And I hope Senator Warner will understand.

Senator Robb, we appreciate your taking time to come and to introduce the nominee. And I would, without further ado, turn to you for that introduction.

OPENING STATEMENT BY SENATOR ROBB

Senator ROBB. Thank you, Mr. Chairman. I am delighted to be able to participate. I had frankly thought that Senator Warner would be here; I know he will be here momentarily. I had planned to augment what he was going to say formally. I have the benefit in this particular case, however, of having known Mrs. Wilson, although I knew her in a prior incarnation and prior name. For quite a number of years she was, at that point, the executive assistant and finally chief of staff to my predecessor as Governor of Virginia, with whom I worked on any number of issues, John Dalton.

At the conclusion of Governor Dalton's term, she came up and worked with Senator Warner for a number of years. I do not remember the exact number, but there were quite a number of years before she went over to the Environmental Protection Agency. And

she has served, to the best of my knowledge, certainly to all of my personal experience, with distinction in each of the posts.

She has been a loyal representative of the political interests which she has served, but she has done so with grace and charm. She has been respected by all those with whom she has had an opportunity to work over the years. And I would heartily recommend her to you for confirmation at this time. And I know that Senator Warner will have equally laudatory things to say about her.

I know of no one who would offer any contrary evidence or testimony at this particular time, Mr. Chairman, and if your time schedule is such that you have to depart in a relatively short period of time, I would suggest that this is one that you could handle quite quickly and that the—I started to say the Commonwealth, because she has served the Commonwealth in several capacities, but—the United States and the Commonwealth would again be well served.

Senator KERRY. Thank you very much, Senator Robb. I appreciate, the committee appreciates those comments. I think it is always helpful to have an introduction from someone who has worked with a nominee. We appreciate your comments.

I would like to just say for the record that Mrs. Wilson has, in the audience, her father, Captain Frank Manson, and her husband, John Wilson. And we certainly welcome both of them. I know they are proud of you and look forward to listening to your plans and priorities.

As far as the committee is concerned, obviously, we are deeply interested. And thank you very much, Senator Robb.

Senator ROBB. Thank you, Mr. Chairman.

Senator KERRY. The position of Assistant Secretary for Oceans and Atmosphere is a very important one, more so today perhaps than on prior occasions. And that is for obvious reasons. We are now a country that has become aware of oil spills and sensitive to ecological disaster. We are seeing increasing pressures on our fisheries, on our coasts, the entire question of coastal zone management, climate change, all of these are issues of enormous consequence.

I am anxious to obviously explore with you, within the time constraints, your thoughts about those priorities, your sense of mission at NOAA, and how you view the prospects, over the course of these next years, for stronger enforcement, stronger research, and I think a stronger response to what is increasingly felt as a more and more important issue.

So, having said that, I would also acknowledge that you do indeed come to this job with a significant cross section of experience, and we are pleased with that. I think it is good to have people that have been elsewhere in government, in different roles. I think it enhances the individuals performance.

As I mentioned to you previously, I personally have a few concerns which I do want to explore with you today. And they are, in my mind at least at this moment, not insignificant. I want to explore them and let us see where they take us.

Senator Hollings has an opening statement that I will include in the record along with his questions and the answers.

[The statement, biographical sketch, and questions and answers follow:]

OPENING STATEMENT BY THE CHAIRMAN

Good afternoon. As many of you know, I played a major role in the establishment of National Oceanic and Atmospheric Administration (NOAA) back in 1970. Since that time, I have continued my involvement with the agency's programs and budget through my work in this Committee and on the Appropriations Committee.

I am pleased to be here today to review the nomination of Jennifer Joy Wilson to become Assistant Secretary of Commerce of Oceans and Atmosphere. In this position, Ms. Wilson will also serve as Deputy Administrator of NOAA. NOAA is the nation's leading civil oceanic and atmospheric research and service agency. The Deputy Administrator is responsible for formulating and executing policies and programs for the agency's varied missions. These missions include the advancement of marine and atmospheric sciences, management of our marine fisheries, monitoring and predicting our weather, and determining the impact of man's activities on the environment. Ms. Wilson will have specific responsibilities for overseeing public and congressional affairs and directing intergovernmental relations.

A graduate of the University of North Carolina, she has worked in a variety of policy-making and management positions, including administrative assistant in the Office of Communications at the White House during the Ford Administration, executive assistant to then-Governor of Virginia, John Dalton, and legislative director and executive assistant to Senator John Warner. Since September 1985, Ms. Wilson served as Assistant Administrator for External Affairs at the Environmental Protection Agency (EPA). Her duties at EPA were similar to the duties she will handle at NOAA. Ms. Wilson will join Dr. John Knauss, the NOAA Administrator, in guiding this most important federal agency.

As we leave the 1980s and enter the next decade, we must reevaluate our ocean and coastal policies and institute programs that reflect our high interest in these resources. During the past decade Congress worked to support certain programs despite the fact the Administration appeared disinterested. Many of the environmental problems we faced ten years ago are unresolved and unabated. We continue to overdevelop our coastal areas, destroy our wetlands, and pollute our oceans and estuaries. These problems must be addressed and solutions must be found.

Clearly, NOAA was created for this reason; that is a part of its mission. And, to carryout its mission, the agency must have capable and qualified leaders. I think Ms. Wilson can provide NOAA with the leadership it needs to address these pressing issues.

ERNEST F. HOLLINGS, SOUTH CAROLINA, CHAIRMAN
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United States Senate

COMMITTEE ON COMMERCE, SCIENCE,
AND TRANSPORTATION

WASHINGTON, DC 20510-8125

STATEMENT FOR COMPLETION BY PRESIDENTIAL NOMINEES

(If more space is needed, please use attached REMARKS sheet)

A. BIOGRAPHICAL DATA

1. Name: WILSON JENNIFER JOY
 (Last) (First) (Other)

Address: 711 W. ABINGDON COURT U.S. DEPARTMENT OF COMMERCE
 (Current residence) (Business)
ALEXANDRIA, VA 22314 15TH & CONSTITUTION AVENUE, N.W.
WASHINGTON, DC 20230

2. Position to which nominated: ASSISTANT SECRETARY OF COMMERCE FOR OCEANS AND ATMOSPHERE AND DEPUTY ADMINISTRATOR OF NOAA Date of nomination: SEPTEMBER 8, 1989

3. Date of birth: JANUARY 10 1953 Place of birth: NAPLES, ITALY
 (month) (day) (year)

4. Marital status: MARRIED Full name of Spouse: JOHN WILLIAM WILSON, III

5. Names and ages of children: JENNIFER LYNNE WILSON
AGE 21 MONTHS (BORN 11/21/87)

6. Education:

Institution	Dates attended	Degrees received	Dates of degrees
UNIVERSITY OF NORTH CAROLINA CHAPEL HILL, N.C.	1972-1974	B.A. SPEECH	1974
GEORGE MASON UNIVERSITY	1972 SUMMER	-	-
UNIVERSITY OF NORTH CAROLINA GREENSBORO, N.C.	1971-1972	-	-
UNIVERSITY OF VIRGINIA	1970-1972	-	-
GRANBY HIGH SCHOOL NORFOLK, VA	1967-1970	HONORS DIPLOMA	1970

7. Employment record: List all positions held since college, including the title or description of job, name of employer, location of work, and dates of inclusive employment.

From	To	Name of employer	Address	Type of work
SEP 85	PRESENT	U.S. E.P.A.	401 M STREET, SW WASHINGTON, DC	ASSISTANT ADMINISTRATOR FOR EXTERNAL AFFAIRS
JUL 85	SEP 85	U.S. E.P.A.	401 M STREET, SW WASHINGTON, DC	CONSULTANT
JAN 85	JUL 85	SEN. JOHN WARNER	225 RSOB WASHINGTON, DC	EXECUTIVE ASSISTANT
JUN 84	DEC 84	WARNER '84 CMTE	406 E. MAIN STREET RICHMOND, VA	CAMPAIGN MANAGER
OCT 82	JUN 84	SEN. JOHN WARNER	421 RSOB WASHINGTON, DC	LEGISLATIVE DIRECTOR
JAN 81	JAN 82	GOV. JOHN DALTON	STATE CAPITOL RICHMOND, VA	SENIOR EXEC. ASST.
NOV 77	JAN 81	GOV. JOHN DALTON	STATE CAPITOL RICHMOND, VA	EXECUTIVE ASSISTANT

8. Government experience: List any experience in or direct association with Federal, State, or local governments including any advisory, consultative, honorary or other part-time service or positions.

(1) SEE ITEM 7 ABOVE FOR FEDERAL AND STATE POSITIONS, (WHITE HOUSE-OFFICE OF COMMUNICATIONS, GOVERNOR'S OFFICE, U.S. SENATE OFFICE AND U.S. E.P.A.)

(2) IN COMMONWEALTH OF VIRGINIA, SERVED AS GOVERNOR'S APPOINTEE, CONFIRMED BY VIRGINIA GENERAL ASSEMBLY, TO YOUTH GOVERNMENT DAY ADVISORY COMMISSION 1979-81.

9. Political affiliations activities: List all memberships and offices held in or financial contributions and services rendered to all political parties or election committees during the last 10 years.

1984: WARNER '84 COMMITTEE, CAMPAIGN MANAGER.

1988: WAHLQUIST FOR SENATE - PRE GOP CONVENTION STEERING COMMITTEE MEMBER.

1979-89: CONTRIBUTOR TO GOP STATE AND NATIONAL PARTY

In any of the previous ten years, my financial contributions to State and national GOP did not, to the best of recollection, total more than \$400 in any one year. I have not retained records/checkbooks and am,

therefore, unable to provide the exact amounts. However, the grand total of all political contributions for the past ten years combined is less than \$4000.

QUESTIONS FOR THE RECORD TO JENNIFER JOY WILSON
FROM CHAIRMAN ERNEST F. HOLLINGS

1. Please describe as completely as possible your view of the mission of the National Oceanic and Atmospheric Administration (NOAA).

NOAA's mission to monitor, predict and disseminate information on the oceans, atmosphere, marine resources and their interaction, defines the Agency as the environmental earth systems agency in the Federal Government. It is NOAA's responsibility to furnish timely and accurate scientific data for use by the Administration and the Congress in establishing the necessary federal regulations and policies governing the proper use of our oceans and atmosphere. NOAA's charge to bring a systematic approach to better understand natural and human induced processes which affect the biosphere is largely defined by its 205 statutory mandates, including global climate research, weather forecasting and prediction, marine mammal protection, management and regulation of our marine fisheries resources, operations of the civilian satellite systems, air and sea chartering and mapping to ensure safe navigation and coastal and marine resources assessment.

2. Most recently, you were the Assistant Administrator for External Affairs for the Environmental Protection Agency. Please describe your day-to-day responsibilities at EPA? What do you view as your successes while at the agency?

As head of EPA's Office of External Affairs I managed the activities of 140 employees at headquarters and another 200 spread throughout EPA's ten regional offices and administered a \$23 million budget. Our five constituent offices were: Federal Activities, Congressional Liaison, Legislative Analysis, Public Affairs, and Community and Intergovernmental Relations. Our responsibilities ranged from managing EPA's wetlands program, to monitoring internal compliance with the National Environmental Policy Act, to reviewing of environmental impact statements on major Federal actions prepared by other Federal agencies, to the full spectrum of consultation and communication functions with the Congress, the states, the news media and all other external interests.

I managed the activities of 140 employees at headquarters and another 200 spread throughout EPA's ten regional offices and administered a \$23 million budget.

During my tenure at EPA, the agency's communication and consultation activities were significantly improved through the establishment of an agency-wide communications strategy process. EPA's public and youth education efforts were revitalized and the

consistency, frequency and quality of the Agency's interaction with the Congress, the news media and intergovernmental and private sector constituencies were enhanced.

I directed and executed initiatives for improved Federal government compliance with environmental laws, such as development of the Federal Facilities Compliance Strategy and the Environmental Audit Program for Federal Agencies; recommended the expanded wetlands protection program; and initiated six communications programs which resulted in improved public involvement in government decision-making with no new resources.

3. Please outline your primary goals and priorities for NOAA, assuming you are confirmed as Assistant Secretary.

If confirmed, my primary goals and objectives will be to see that NOAA carries out the mandates of the Congress and the directions of the Under Secretary and Secretary of Commerce and the President. The Under Secretary has established several areas for special emphasis: global climate change, coastal oceans program, national weather service modernization, and improved data management. I look forward to working with this Committee to insure that these and other issues, so critical to the well-being of our planet, are properly addressed. I will add my focus to insuring cross-cutting consultation to policy development, to expanding on interagency cooperation, and to ensuring the credibility and public understanding of NOAA's scientific and regulatory programs.

4. What would you identify as the most important challenge to face in the upcoming months? Over the next five years?

For the immediate future, ensuring that NOAA is carrying out its mission priorities to its fullest capability is the most important internal challenge facing the new management team. This includes building a consultative process internally, with Congress, and with others external to NOAA to maximize input on the program agenda. The Under Secretary has directed policy and operational systems be put into place to effectively manage the Agency.

Over the next five years, NOAA must meet its important part of the challenge of what some are calling the 1990s "the environmental decade". From stratospheric ozone depletion and global climate change to coastal oceans monitoring and marine resource management, NOAA has scientific program and policy responsibilities which must be both credible and visible if NOAA is to contribute effectively to the solutions.

5. What will be your duties in the day-to-day management of the agency?

If confirmed as the Assistant Secretary of Commerce and Deputy Administrator of NOAA, I envision my day-to-day responsibilities would be in two basic areas: policy development and communication. I plan to manage the NOAA-wide policy development process to ensure multi-disciplinary as well as vertical line-office consultation, so that policy options for the Under Secretary and Secretary are internally analyzed by all pertinent NOAA offices, and to ensure any new directions can be credibly implemented consistent with our Congressional and Administration directives. I anticipate I would represent NOAA on many interagency policy working groups, and would focus on NOAA's international representation of policy being consistent with the Under Secretary's position. I would also assist the Under Secretary in monitoring and strategically directing NOAA's overall communications with the legislative branch, within the Commerce Department, within the executive branch, with state, local and foreign governments, and with the private sector. The policy and communications areas complement each other well, as I have observed first-hand that the better policy decisions are derived with proper consultation internally and externally. Of course, I intend, if confirmed, to work closely with the Under Secretary on management oversight and to serve as the Acting Administrator of NOAA in the absence of the Under Secretary.

6. What, in your view, is the present state of NOAA, and do you feel that it could be improved? What program areas in NOAA do you feel should be top priority? Why?

Generally, I feel that NOAA's record is one of accomplishment and excellence. Given tight budgetary constraints, NOAA has tried to utilize its resources and personnel to its best ability.

Obviously there is always room for improvement and if confirmed I look forward to working with the Under Secretary to see that the nation gets the best information and service from this most vital agency.

As to priority program areas, these fall into three basic categories: weather service modernization, global climate change monitoring and prediction, including improved data management and coastal ocean programs.

The need for good forecasts and predictions from the weather service was dramatically shown by the recent disaster caused by hurricane Hugo. Fortunately, accurate forecasting, from sea to landfall, was a major factor in the low death and injury rate in the face of such a powerful storm. However, as those inland know, our forecasts of Hugo after landfall were not so accurate and, NOAA's current systems are terribly outdated and in need of replacement. Recent tests have shown how much more responsive the weather service can be given the quantum leap in upgraded technologies such as NEXRAD.

As for global climate change monitoring and prediction, I need not advise this Committee of its importance, not just to the nation but to the planet as a whole. Accurate scientific data must be obtained and properly analyzed as quickly as possible so that critical policy choices of potentially tremendous ecological and economic impact can be made with as much information as NOAA and the scientific community can offer.

The problems of pollution of our coasts and oceans demand our full and close attention. The public, the Congress and the President all share in the alarm that rang from our shores. With greater and greater demands being put on our coastal and ocean environment, NOAA must be committed to using all available resources to seek proper answers and solutions to the myriad questions and problems being posed in the area.

7. Over the past years, the Reagan Administration consistently proposed to eliminate the Sea Grant Programs, and the Coastal Zone Management Program, as well as reduce funding for many of NOAA's ocean, coastal, and fishery programs. Congressional support for these programs has been bipartisan and strong throughout. What position will the Bush Administration take on these programs in the fiscal year 1991 budget?

At present specific proposals on these issues are under deliberation in FY 1991 budget process. However, I can state that both NOAA and the Department of Commerce have reviewed these programs closely in their '91 budget deliberations in light of the President's public stance on the importance of the coast, oceans and environment.

8. In your most recent position as Assistant Administrator for external Affairs for the Environmental Protection agency, you has the opportunity to oversee most of EPA's activities. This Committee is concerned that in certain oceanic and atmospheric programs, NOAA's and EPA's activities overlap. What is your view of this problem? How do you plan to address this concern if you are confirmed as Deputy Administrator?

There are areas of contrasting as well as complementary program activity within EPA and NOAA, which I view as an opportunity for closer coordination in scientific research, evaluation, and program implementation. Already in recent weeks NOAA and EPA have renewed dialogue in such areas as wetlands protection, coastal ocean policy, marine damage assessment, and global climate change. The Administrator of EPA and the Administrator of NOAA met to renew mutual efforts in collaboration. Each agency has a great deal to offer the other in support of our respective missions, and I consider my experience at EPA as a tremendous enhancement to what, should I be confirmed, will be my responsibilities at NOAA. My considerable familiarity with EPA's legislative mandates and regulatory functions should be helpful to a better understanding between the two agencies.

9. Concern has grown in recent years regarding the effect of human activities on the global environment. A U.S. Global Change Program has been suggested to improve our understanding of these impacts on the earth system. How do you see NOAA's contribution to such an effort developing over the next years?

I believe that NOAA's primary contribution to the U.S. Global Change Program is to improve scientific understanding of climate change as a basis for an eventual capability to predict future climate conditions. Understanding of natural variation in climate is essential if we are ever going to be able to assess the effects of human civilization on climate through such activities as burning fossil fuel or cutting forests. Gaining this improved understanding of the natural mechanics of climate is one of NOAA's highest priorities.

10. A major effort is underway to modernize the Weather Service. Are similar plans under consideration to modernize the rest of NOAA's antiquated infrastructure, e.g. ships, buoys, aircraft and facilities? Where does the agency place its priorities?

As the earth systems agency, NOAA must use a wide-variety of sophisticated tools to observe the natural environment, analyze changing conditions and provide information to numerous users. Modernization of all of the tools, including future satellite needs, is a continuing and permanent part of NOAA's activity. Priority setting is the most important part of managing long-term capital investments in NOAA, and Under Secretary Knauss' directive to prepare a Five Year Strategic Plan for NOAA will be the mechanism to weigh and decide NOAA's priorities every year.

Senator KERRY. Would you like to make an opening statement at this time.

STATEMENT OF JENNIFER J. WILSON

Ms. WILSON. Thank you very much, Mr. Chairman. I appreciate very much Senator Robb's gracious remarks in introducing me. I am happy to be here today as the President's nominee for Assistant Secretary of Commerce for Oceans and Atmosphere, and Deputy Administrator of NOAA.

This hearing provides me the opportunity to share with you some of my goals and aspirations for NOAA. My four years as an assistant administrator of EPA have given me a broad perspective on the environmental challenges facing our Nation and our world.

This, coupled with my service in the White House, in a senator's office and in a governor's office have provided an excellent education in relativity. There is no task facing the inhabitants of our planet any more difficult than assuring that the planet itself is sustained.

If confirmed, Mr. Chairman, I hope to provide a vital link to EPA and other agencies involved in environmental programs, so that, together, we maximize abilities to solve problems.

There is a tremendous range of challenges facing NOAA in the years ahead, and if confirmed, I look forward to working with this committee and others in Congress to forge appropriate solutions. It is not enough, however, for NOAA to be in the right place at the right time; we must also be moving in the right direction.

NOAA administers 205 statutes, operates more than 30 laboratories, three environmental satellite systems, and an environmental fleet of ships and aircraft to meet its missions in air and water research, mapping, weather forecasting, fisheries management, and ecological protection. The ecological and economic stakes and the global environmental challenges looming ahead are high.

We are all proud of NOAA's history of excellence. NOAA could bring to bear tools for monitoring the oceans and atmosphere on a global domain with high resolution. NOAA's studies will shed new light on how the earth-system works. And NOAA's world-class scientists have developed substantial capabilities for predicting how the integrated earth-system will likely evolve in response to solar variability and other natural as well as human-induced change.

The Nation's scientific community is rapidly eliminating or reducing areas of ignorance and creating a knowledge base that will make possible more effective environmental decisions.

Years from now, as the history of this period is being documented, I hope scholars will say that NOAA played a vital role in helping our country and the world make wise environmental decisions, and in archiving a record of oceanic and atmospheric conditions of the past that can be used by future generations.

Surely it is true, as John James Audubon said, that we do not inherit the earth from our ancestors, we borrow it from our children. Surely it is a great privilege and responsibility, but also a pleasure, to be offered the opportunity to serve as stewards of that trust.

In this spirit, I appear before the committee today.

Thank you, Mr. Chairman.

Senator KERRY. Thank you very much, Ms. Wilson.

We are now joined by the distinguished senior Senator from Virginia, and a good friend. I am delighted, Senator Warner, that you have taken time to come over here. We look forward to your statement—I apologize for not waiting for you. As I mentioned previously, I have to be on the floor to manage the treaties at 3.

STATEMENT OF HON. JOHN WARNER, U.S. SENATOR FROM VIRGINIA

Senator WARNER. Mr. Chairman, I apologize for being late. Jennifer Joy Manson, having been my senior assistant, is familiar with my tardiness occasionally. But it was not intentional today.

We had our midday caucus to plot against Democrats, and it just overflowed today.

Senator KERRY. Overflowed with confusion.

Senator WARNER. For praise, Mr. Chairman.

Mr. Chairman, it is a privilege to appear today to introduce to the committee Jennifer Joy Wilson, the President's nominee to be Assistant Secretary of Commerce for Oceans and Atmosphere. It is also a pleasure because I have known and worked with Ms. Wilson for many years. Joy once served as my legislative director and later as my executive assistant. She also served as my campaign manager in 1984.

The National Oceanic Atmospheric Administration [NOAA] is responsible for issues of vital importance to our environment. The Assistant Secretary is responsible for overseeing NOAA's mission to understand the oceans and atmosphere and translate these findings into protection for the planet.

We are indeed fortunate that the President has nominated a person of Joy's qualifications and experience to fill this position. I know the committee has Joy's resume, but I would like to highlight a couple of items.

As I stated, I have known this fine American for many, many years. And I have enjoyed a close personal relationship with her and her husband and her family for these many years, and now her children. And I commend this outstanding individual to the Chair and the members of this committee and, of course, the Senate as a whole.

Between 1985 and this year, she has served as Assistant Administrator for the Environmental Protection Agency's Office of External Affairs. In this position she oversaw the implementation of the National Environmental Policy Act and provisions of the Clean Air Act, which require environmental analysis of all major federal actions.

In addition to the Senate experience, Ms. Wilson served in state government, working for the late Governor of Virginia, John Dalton, and serving for a time as his chief of staff.

Mr. Chairman, the challenges facing the assistant secretary are many, but I know she will ably and conscientiously carry out the important responsibilities of the position for which she has been nominated. She will indeed be a credit to this administration and a valuable resource for this committee. Joy is accompanied here

today by her husband, John Wilson; I would like to take this opportunity to recognize him.

In conclusion, Mr. Chairman, I wholeheartedly endorse Joy and I urge this committee to act swiftly and favorably on her nomination.

Mr. Chairman, I say that with no reservations whatsoever. This is a very, very fine individual and we as citizens are privileged to have her offer her services once again to her country and to her President. And we appreciate your coming here today, and good luck.

Senator KERRY. Thank you very much, Senator Warner, for those warm comments of recommendation. And I appreciate enormously, on behalf of the committee, your taking time to come over.

Ms. Wilson, let me begin at the beginning, I suppose. As I mentioned in my opening comments, the committee views this particular agency, I think, with far more importance than perhaps the budget priorities the administration have given it over the course of the past eight years, and we have, each year, been called on to place extra money in one sector or another or in several sectors.

The Agency has enormous jurisdiction over coastal management, over fisheries management, the Weather Service, ocean and atmospheric research, and so forth. I know you are familiar with our record vis-a-vis the agency and the budget recommendations.

I am somewhat concerned because you are going to be the number two person there, and Dr. Knauss has made statements about the importance of the agency in the administration's view, and we are looking forward to Secretary Mosbacher's leadership to really making that happen now.

But in your responses to the pre-hearing questions, which I read through before coming here, your answer to the definition of the NOAA mission was more in the context of monitoring, predicting, disseminating information than it was a reflection of the hands-on aspects of fishery management, coastal management, and leadership.

I wonder if you would care to comment, add to the written record that has been submitted at this point, and share with us your sense of that particular hands-on role.

Ms. WILSON. Thank you very much, Mr. Chairman.

I certainly, wholeheartedly agree with you, that our regulatory mandates are extremely important, perhaps even more so today than originally envisioned some 20 years ago.

My answer to the pre-hearing question, I think, was trying to look at the overall earth-systems responsibilities of the agency, and in no way meant diminution of the importance of the individual programs or issues, or programs that are pending within NOAA.

I certainly believe that some of the most difficult and contentious issues we have are fisheries resource management, coastal zone management. I think they deserve our deep attention and immediate attention, and we look forward very much to working with you. And if I am confirmed, I would like to be part of that effort in crafting solutions that can meet the challenges that we are identifying today.

Senator KERRY. Perhaps you would share with me a few thoughts about your sense of the fisheries management priorities. How would you define those?

Ms. WILSON. I think I would define one of the first priorities as being a review of our conservation efforts in our fisheries resource management. I have become aware that some of our fisheries areas may be in danger of being overfished, and I think that that is a major responsibility that NOAA has to make sure we have got a renewable resource there that is replenishable for both the commercial and the recreational sports fisheries.

So I think one of the first priorities is to make sure that we have worked with our regional councils to ensure that where there is categorical overfishing that we are developing the proper plans and programs in a consultative manner to be able to combat that.

I think I would probably put, of course, the reauthorization of the Magnuson Fishery Act, which is pending right now, on an extremely high priority basis, because that is the major tool for managing our fishery resources within the EEZ, and we would want to make sure we are working closely with you and others to ensure that we have got the problems that we identify from the administrative side of things brought to your attention and work that legislative process through with you.

I think the Marine Mammal Protection Act, through its amendments of last year, is in the implementation phase now, and we need to make sure we are working closely with you on that implementation and receiving your guidance and input.

I am aware that there are many issues with endangered species and marine mammal protection that cause us to need to take a hard look right now and make sure that we are putting our priorities in the right place. So I guess, in a nutshell, I would call those the first couple of priorities.

Senator KERRY. Well, you raised two issues that flag a couple of other inquiries. One, I am delighted with your answer with respect to the fisheries focus that you articulate, but in the pre-written list of priorities, there was a total omission of any fishery-related programs in NOAA priorities. Is it low on the priority list or is that merely an oversight?

Ms. WILSON. I think that must be an oversight, because it is certainly not low on the list. In fact, I have heard the Under Secretary, John Knauss, say that he is probably spending more time on fisheries issues than any other particular issue in NOAA. And because it is a regulatory mission and one where resource management is the responsibility of NOAA, that is quite appropriate.

I think what I was reaching for in trying to enumerate areas of special emphasis are areas where perhaps NOAA needs some different attention to where our policies have been leading us programmatically. And perhaps that was the reason why it did not get listed, but it is not intentional. It is a priority.

Senator KERRY. Now, you also mentioned the Marine Mammal Protection Act, which, as you rightfully cited, because of the recent amendments is a significant concern here.

Last fall, with the amendments we put in, we set some firm deadlines for compliance with respect to the dolphin protection programs. Those deadlines are now nearly upon us and we are con-

cerned that there is not enough evidence of NOAA having moved to notify foreign governments regarding those amendments and to work with the foreign fleets to reduce the dolphin mortalities.

Number one, are you concerned about that? Number two, will you have a direct role in trying to implement and improve that particular problem?

Ms. WILSON. Mr. Chairman, I am concerned about it and yes, I think as the deputy administrator, I would have a direct role in ensuring that the implementation with foreign countries is working on as tight a schedule as we can possibly achieve.

Senator KERRY. Will you be able to meet the deadlines?

Ms. WILSON. As I understand it, we are on track to meet deadlines.

Senator KERRY. And I have another question on the fishery interactions. With respect to sea turtle protection and those requirements, I am told, by those who know more about it than I do, that there is an ambivalence, and some flip-flopping, depending on who you are and how you view it, with respect to the position on that.

Can you tell us where we stand now with respects to TEDS, and what recommendations you might offer us, so that we might have some consistency in the enforcement process?

Ms. WILSON. My understanding of the history of TEDS, Senator, is that it has been a very controversial history since the initial regulations were printed in the Federal Register some years ago. But the status of TEDS today is that the original TEDS regulations are currently in effect and are being enforced.

The only status change that I can point to at this time would be a National Academy of Sciences report that is due to be released sometime late winter or early spring of this next January-February-March time frame.

But those regulatory decisions were reinstated as of September of this year.

Senator KERRY. So your sense is, that is now in place and there will be a consistency and the position is determined.

Ms. WILSON. I believe so, Mr. Chairman. The enforcement date shows that compliance is extremely high with TEDS in the Gulf and in the Atlantic and, of course, in Florida.

Senator KERRY. Two other areas. I have a number of other questions; I may submit some in writing because of the time constraints I have put us under, but one area, and then I would like to come to a final area of inquiry. One of my pet efforts has been the Coastal Zone Management Act, and we are currently rewriting that, as I think you know, to try to strengthen it.

There are several proposals before the Congress, and I trust you have had a chance to familiarize yourself with them.

The Bush administration, I understand, is also reviewing that program, with respect to the reauthorization process for next year. The President has called for an era of coastal awareness, a call which we support and an imperative that we share.

My question is, should we anticipate full funding for that program next year?

Ms. WILSON. Senator, I agree with you that the administration is reviewing the Coastal Zone Management Act right now. I can

assure you that they are aware of the legislation that has been introduced, and we want to increase consultation on areas to consider within the administration for support.

I think it would be premature for me to try to indicate a level of funding or an exact piece of legislation that might be supported by the administration, but I can assure you that we are very interested in getting your input.

Senator KERRY. Can you think of any reason why it should not be fully funded? Can you achieve the goals of the Coastal Zone Management Act if it is not fully funded?

Ms. WILSON. Senator, I guess the overall mandate that you are operating under and that we are, too, is, of course, trying to reduce the Federal budget deficit. As far as that implication on any particular program, I do not feel I can make that judgment.

There are others that would have more expertise than I.

Senator KERRY. What will you say to John Knauss? What will you say to Secretary Mosbacher with respect to the coastal zone management program? Will you tell them the country will be greatly injured if we reduce this funding or will you tell them in the efforts to reduce the deficit this is a program that can go?

Ms. WILSON. I would say, Mr. Chairman, that we know that our coastal zone needs help, and we know that we need to manage our coastal resources carefully both on land and in the water, and this is a time to make sure that we are putting programs in place and keeping programs in place that are achieving those objectives. That is what I would say.

Senator KERRY. I am having a hard time telling whether that is a strong advocate or whether that is a diplomatic answer in the hearing process.

Ms. WILSON. I really believe we have got to have coastal zone management programs. I am just not comfortable with trying to foreshadow for you what might be a coastal zone program that the administration is reviewing at this point, but I am not trying to "dance". I am just trying to say I do believe that we need to be focusing on that area, and I am in agreement with you in principle.

Senator KERRY. Well, let me ask you about a last area before I turn to my colleagues. You are going to have responsibility for natural resource development policy in a sense, and I wonder what your philosophy is about the natural resource development of the oceans, particularly with respect to the ocean drilling controversy that has existed over the last years.

Ms. WILSON. Mr. Chairman, I believe that there are ways to develop in an environmentally sound manner. I believe that our fisheries responsibilities force us to take a very careful look at impacts to fishery resources when contemplating natural resource development within our coastal zone.

Senator KERRY. What do you mean by "take a careful look"?

Ms. WILSON. Well, I believe our responsibilities would call for us to examine impacts to fisheries or potential impacts to fisheries when activities may be contemplated dealing with natural resource development such as if there would be pollution impacts or if there would be disturbance of the habitat, that type of thing.

Senator KERRY. So, the basic thrust of NEPA and its efforts to require environmental impacts studies, you think you would support this process, that it is important?

Ms. WILSON. Indeed, as a part of its mission, NOAA has responsibilities under NEPA to analyze impacts and to report any that would be envisioned in that process.

Senator KERRY. What are your views specifically with respect to offshore oil and gas exploration on the Georges Bank?

Ms. WILSON. Senator, I have not formulated a particular position on the Georges Bank, and I am not aware of NOAA having a specific position on that. I am sure there is analysis, however, on what is contemplated as to impact from NOAA's perspective, and I would like to look into that.

Senator KERRY. You personally have never formulated an opinion on that?

Ms. WILSON. When I was at EPA, I was involved in reviewing the Environmental Protection Agency comments on Georges Bank, and EPA's position was, as I recall, one of concern more in the latter developmental stages of oil and gas production and less so on the exploration, but I would have to relook at the comments.

Senator KERRY. Well, did you take an official position on the offshore oil and gas activities on Georges Bank?

Ms. WILSON. We had comments under NEPA and under section 309 of the Clean Air Act EPA did.

Senator KERRY. But did you personally take a position on that?

Ms. WILSON. I am only hesitating, Senator, because I cannot remember if I signed a piece of correspondence to Interior commenting on that or if it had been our regional administrator.

Senator KERRY. Well, what would your level of opposition have been? How would you characterize it?

Ms. WILSON. The level—it was not at the level of referring it to the Council on Environmental Quality, which is EPA's strongest level of objection. And so, it either was a category below that of environmental objections or a category below that, which is lack of objections—but I know it was not to refer it to the President's Council on Environmental Quality, which would be the environmentally unacceptable position of EPA.

And I believe the reason for that is because it was an exploratory, an environmental impact statement for exploration only.

Senator KERRY. Did you ever have occasion to have any direct input to the decision-making process as to what would happen on that exploration?

Ms. WILSON. No, sir, not as to what would happen or not happen, but I did have direct input into EPA's review of the environmental impact statement as far as what our comments would say and in our recommendation to the administrator.

Senator KERRY. Did you come to a personal conclusion about what you ought to say to the administrator?

Ms. WILSON. I believe I was very concerned about our region's concerns, and I remember our headquarters staff had in-depth discussions on the science behind potential impacts of drilling, exploratory drilling on Georges Bank and tried to determine from a programmatic perspective whether the environmental impact state-

ment for exploration should incorporate potential impacts that could be projected down the road for development or production.

And because this was an exploratory EIS, I believe what we decided in headquarters was to keep our comments to the exploratory phase, but I believe what we did was also add our regional comments for the latter phases to our public comments so that all of the comments of EPA were on the record.

Senator KERRY. Well, the reason I raised this issue is that it is my understanding that there was, in fact, considerably more discussion and firmness of position than perhaps you are describing at this point.

I mean, it is my understanding that Mike Deland, then the EPA administrator in the region, was soundly at odds with you on this issue. I mean, would you characterize that as an accurate description?

Ms. WILSON. We did have some differences of opinion as to how far our comments from EPA were supposed to go.

Senator KERRY. Did it not go further than comments? Was it not on the substance of the decision?

Ms. WILSON. Well, no, because that is relevant if your comments were going to be on exploration, development and production, that is one thing. If the comments were going to be on exploration only, that is another.

So, the whole thing was what our comments were to be geared to, and that was the nub of our discussions, and we did have many of them and in depth.

Senator KERRY. How does that concept of being at odds and limiting the comments, so to speak, square with your comment that you made earlier in the hearing today that you ought to take a careful look and have an examination of the impacts to the fisheries, which is a full environmental impact statement, is it not?

Is that not precisely what Mike Deland was pushing for?

Ms. WILSON. Well, I would really like to look at my notes again to make absolutely sure on that, Senator, but my recollection is—

Senator KERRY. Let me refresh you.

I have a memo here to Lee Thomas from Mike Deland, and it says, "Attached is the region I position with explanatory footnotes on DOI's latest Georges Bank drilling proposal. As you know and I are in disagreement on EPA's position. Joy has agreed that you and I and then three of us should discuss this before the agency's policy is finalized. I look forward to chatting with you soon."

A copy was sent to you, his memo directly to you in the draft EIS says, and I quote, "We, therefore, strongly oppose this lease sale. Our major recommendations are that the Secretary defer from the final proposed program and defer altogether any leasing in the North Atlantic. We believe deferral"—and it goes on—"represents the environmentally preferable action alternative. We believe that the environmentally preferable combination of alternatives should include deferral of sales in the Atlantic and so forth."

That is not the position that you took, is it?

Ms. WILSON. Well, it is actually fairly close to the position. I believe our final comments, Mr. Chairman—and I do not know if you have them also available—but I believe they talked about—

Senator KERRY. I do have those.

Ms. WILSON. I believe they talked about concerns that EPA had mentioned in their review of the five-year plan, which included Georges Bank and had recommended Georges Bank for deferral, I believe, at that point.

Senator KERRY. You see what I am getting at here. My concern—and I do not want to abuse my colleagues' patience—but my concern is that it is probably twofold from a management perspective if one of the regional administrators is advocating very strongly for a full study, and now you are going to come in and head up this agency as the number two person with major responsibilities for the process by which administrators are going to be listened to, and for the fisheries concerned. I mean, this is a fisheries advocacy.

I am concerned that there is, number one, perhaps a predisposition with respect to the Georges Bank. Number two, that there is a process predisposition that might not take into account the strength of the recommendations of the regional administrator. I would like you to comment on that and hopefully tell me I do not have anything to fear and explain why I do not, if you can.

Ms. WILSON. Senator, first of all, I began my career in the executive branch of the federal government. I worked in a State office as well as on the Hill, and I can assure you that what local people say and what regional people say is of intense interest and importance to me, and so specifically from that perspective, even though I might have an iteration of disagreement or even a complete disagreement with someone in a region does not in any way imply that I believe headquarters is supposed to ride roughshod or in any way dismiss concerns expressed by the region.

In fact, even in the resolution of this relatively minor disagreement, as it was completed with region I, I felt very strongly that we ought to include region I's comments even though that ended up not being what headquarters recommended.

As far as personal philosophy, I think again, this whole debate which is not particularly clear, perhaps, from the documents you have, but the whole debate, as I recall it, senator, was whether or not this environmental impact statement was supposed to incorporate more than what its stated purpose was, which was the exploration phase of oil and gas development.

Had it been a complete EIS—and EPA certainly wanted more environmental impact information in subsequent environmental impacts statements, which were committed to be done—I probably would not have felt that the region's comments were anything I would have had to debate. But in this particular case, our headquarters staff also had the exact same information that the regional staff had and felt like we had to limit our comments to the instant case, and we did not want this whole 309 program to make an exception in one area and then not make it in other areas around the Nation.

So, it was really a national consistency call there of the management process and much less of a substantive disagreement.

I will say that I am substantively concerned, Senator, anytime we are going to be potentially impacting our natural resources and in an environmentally degradable way, and that is a philosophy. It

is an environmental ethic that I have, and I am sure I will keep it with me for the rest of my life.

Senator KERRY. Well, I find the draft EIS from the regional administrator so powerful that it is very difficult for me to understand how the final decision was made. Let me read it to you, the regional administrator's comment.

He says, "We find the proposed lease sale 96 is environmentally unacceptable because it places at unnecessary risk a proven renewable fishery resource of national and global biological and commercial value. Interior's conclusion that the 'benefit of inventorying with a 14-percent chance of finding a day's worth of oil justifies proceeding with this sale is at best highly unpersuasive and at worst arbitrary in view of the preponderance of data pointing to the opposite conclusion in the EIS.'"

Notwithstanding that, the fact that you were sort of on opposite sides gives me cause for concern. I am not going to belabor it now. Maybe it is something that we could meet and talk on. But, it gives me a cause for concern because I think NOAA needs to have somebody who is going to be front and center. I mean, there are plenty of people down at Commerce to argue for the commercial development aspects of most of these efforts.

I think we need somebody who is going to be the advocate for the fisheries' preservation and for the cause.

I mean, you look at the drift nets situation with Senator Stevens and others so concerned about and so forth. Someone has got to be pressing for those.

Ms. WILSON. I will say again, Mr. Chairman, I agree with your philosophy and I also have it myself. I also have the highest respect for Mike Deland, and I think he is making an extremely fine chairman of the President's Council on Environmental Quality.

I believe that the substance of our difference is not as wide as perhaps his very persuasive memoranda might indicate, but I would be delighted to talk to you about it.

Senator KERRY. While I would be delighted to pursue this with you and, as I say, I do not have a closed mind on this, I just wanted to discuss it.

Senator Stevens, I thank you for your patience.

Senator STEVENS. I had an extensive conversation this morning with Ms. Wilson. Since that time we have reviewed further what I was talking about, and it turned out it was the General Counsel of NOAA who suggested to the North Pacific Fisheries Management Council that the Council had no authority to take action with regard to roe stripping within its council area.

The North Pacific Fisheries Management Council's official newsletter has this statement: "NOAA's General Counsel suggests that the Magnuson Fisheries and Conservation Management Act allows the Secretary of Commerce to regulate only fishing practices, not the type of processing that must occur."

And, based on that statement, the Council did not take final action on measures to ban roe stripping.

I do not know whether everyone understands what roe stripping is, but it results in taking the roe—the eggs out of fish and dumping the fish. It means taking future generations and wasting the current generation.

As I have indicated to Ms. Wilson, I think that is just absolutely wrong. I think most people around here know that I personally wrote much of the Magnuson Act. It was, in fact, my bill to start with when Senator Magnuson was chairman of this committee. He championed it, and he felt that he would have a better chance of getting it passed than I. He did get it passed, and I was the one that moved to make it the Magnuson Act, and I know what it provides.

It definitely has two or three sections in it that are very specific about conservation and management. One says that conservation and management are all of the rules, regulations, and conditions and other measures which are required to rebuild, restore, or maintain any fishery resource in the marine environment. They are designed to assure that the supply of food may be taken, and irreversible or long-term effects in the fisheries resources avoided, and I am sort of paraphrasing that.

Another section specifically states that the Council has the power to regulate the type of fishing gear, vessels, or equipment for vessels. It does not say just fishing vessels. It says vessels.

It further says that the Council may prescribe such other measures, requirements, conditions or restraints as are determined to be necessary and appropriate for the conservation and management of the fisheries. The Department apparently is taking the position that the Councils have only jurisdiction over fishing practices and not processing practices.

If that is upheld, it would be really an emasculation of the Magnuson Act. I think the General Counsel is clearly in error and, up in Senator Kerry's area of the Atlantic, the Bullfish Fisheries Management Plan states specifically it is illegal for any person to purchase, barter, trade or sell bullfish that have been illegally harvested under the plan.

Now, that has nothing to do with just limiting it to vessels. It is a broad-based conservation objective. It was upheld by the District court, as a matter of fact.

I hope that you and others who are down there now would be able to stem this tide. There are people who want to bring back to Washington the authority that Congress has given to the regional councils. The regional councils ought to have the authority to proceed under the Magnuson Act, consistent with the conservation objectives of the area and not some national scheme that would impact the New England requirements on the Pacific or vice versa.

I would hope that you would take a look at that as I have indicated to you. I think roe stripping by the factory trawlers are equivalent to the damage that is being done to the oceans by drift-nets, and I am appalled. This practice just started last year. If it continues, they will vacuum clean the North Pacific and take no food value, just a luxury value roe to be sold abroad. I cannot think of anything worse.

I can understand roe stripping for the purpose of artificial reproduction in hatcheries, by the way. We do practice that at times, and it has been very successful. But there, we save the meat. We have both increased reproduction from highly fertilized eggs and without the risk of the environment in terms of ice and other con-

ditions. We also have the current supply; the annual product is taken to market.

In this instance it went over the side, hundreds and hundreds and hundreds of tons went over the side.

Mr. Chairman, you heard me on driftnets. I want you to know that if this practice is not reversed, we are going to have to have some emergency legislation because we have to have the authority, I think, to prevent this roe stripping practice from becoming a national tradition. If it spreads to other areas, I think equal numbers who represent those areas would have equal reactions, and so I urge you to look into that.

And I would ask that we get a report—if the Chairman does not mind—to the Committee from the Department as to whether the position taken by the NOAA General Counsel with regard to the North Pacific Fishery Management Plan is the official position of the administration.

Ms. WILSON. I will be glad to provide that.

Senator STEVENS. Thank you, Mr. Chairman.

Senator KERRY. Senator Stevens, thank you. I must say that I continue to be not just pleased but moved by the significant leadership that you are providing in a lot of these areas.

I think we can join hand in hand in this effort. I know Senator Stevens led the effort just recently to contact Ambassador Pickering with respect to the driftnet issue. I might add I happened to meet last night with the representative from Taiwan, the ambassador, and he has indeed taken note of that effort. I think they are moving rapidly to try to respond.

Senator STEVENS. Mr. Chairman, we do hope there is some success in that in the next week or two. I might say just parenthetically that I advised Ms. Wilson this morning that, in my experience here for some 21 years, the National Ocean Policy Study, has been consistently bipartisan. We are partisan. We are partisan to fish and to the resources of the ocean, but we are not partisan. I am delighted to have the comments of the chairman.

Thank you very much. I have to go to another meeting, if I may be excused.

Senator KERRY. What I would like to request is, because of my demand to be on the floor to manage the mutual legal assistance treaty, Senator Lott, if you would close out the hearing I would appreciate it. I know Ms. Wilson particularly will appreciate the fact that that will close it out.

Let me just say that, if I can, I am going to leave the record open so that I can submit a couple of additional questions, and perhaps we can meet later. I would like for you and I to meet later before I offer my unconditional support.

As I say, I think you are eminently qualified in many respects, but I really do want to clarify an approach with respect to this particular concern over the Georges Bank and to our region. I would like to have your assurance that we can do that.

Ms. WILSON. You not only have my assurance, but I look forward to that opportunity.

Senator KERRY. Senator Lott.

Senator LOTT [presiding]. Thank you, Mr. Chairman. I will be glad to close out the meeting.

I do want to say that in view of what I have heard today and the request from the chairman, I, too, would like to meet with you subsequent to this hearing to make sure that there is a balance to what you are going to hear from the chairman. I have some concerns, too, that involve the Gulf area.

Let me ask you this. I know you have worked in different government roles with the Governor of Virginia and with Senator Warner and the EPA. I know when you work in a governor's office and a Senator's office you work with a number of different problems. I am particularly interested in getting on the record what your experience has been with oceanography, fisheries, and atmospheric programs so that that information will be available here.

Ms. WILSON. Yes, sir. Verbally or in writing?

Senator LOTT. Well, if you would just like to touch on some things. I am sure that when you were with the governor's office, for instance, you worked with the fisheries along the Virginia Atlantic Ocean side of the country, and I would like for that to be on the record. I would like to know myself that you have done something other than work at EPA, because that is a little unsettling to me, quite frankly.

Ms. WILSON. Senator, it is true that even before working for Governor Dalton when I worked in the Ford White House, I became first cognizant of some of the Ford administration policies on fishery management and coastal zone management; and then in the governor's administration primarily working on the Chesapeake Bay I became quite impressed with and somewhat informed about the condition of that great estuary and the need for trying to put policies into effect and programs into effect that would be able to halt the degradation.

Governor Dalton was able to effectuate the precursor to the current Chesapeake Bay Agreement with the then Governor of Maryland. It was called the Bistate Agreement at that point. I was heavily involved in that agreement and in working with that in our General Assembly in Virginia as well as the Maryland State Legislature.

There are other issues that I worked with also, because I advised the governor on each bill he had before him for signature or veto, and so to the degree that our General Assembly handled fishery and game issues I got involved with that, if not during the legislative process at least at the end of the legislative process.

When I worked for Senator Warner, of course, the Chesapeake Bay was a major priority also of his in the U.S. Senate, and I worked with him and others within the administration to ensure Federal presence on trying again to solve the problems of the Chesapeake Bay and to ensure Federal presence there and coordination with the states and local jurisdictions.

Broadly within the Environmental Protection Agency years, the National Environmental Policy Act, which is something which I dealt with fairly regularly, often would have an element of concern to EPA in the fishery area, although Fish & Wildlife Service and NOAA had the lead in indicating impact to those particular resources.

Senator LOTT. Let me just ask you for the second time if you would add additional information for the record of any experiences you have had with NOAA, fisheries, the oceans, and atmosphere. [The information referred to follows:]

As you requested during my October 24 confirmation hearing before the Committee on Commerce, Science and Transportation, I am providing for the record additional background information on my experience with NOAA-related issues.

I mentioned in my responses to the pre-hearing questions the high priority of NOAA's coastal oceans program, which is designed to make NOAA's line offices work more closely together in addressing fisheries management and research, as well as oceans and coastal waters research. Specifically, the coastal oceans program calls for working on the Mississippi River plume and variation in nutrients in the northern Gulf of Mexico, as well as major habitats' relationship to fisheries productivity.

I would hope, if confirmed, to maximize the use of our considerable resources and expertise throughout NOAA towards fisheries-related problems, which perhaps have not been so specifically oriented in the past. I would look forward to working carefully with Members of Congress and their staffs in carrying out the statutory mandates NOAA is charged with administering, and assure you that NOAA's regulatory responsibilities for marine fisheries is one of NOAA's highest priorities for management attention.

Additionally, to respond to your questions during the hearing, let me put my remarks in context. As the daughter of a career Naval officer, I literally grew up with an abiding appreciation and respect for our oceans and coasts. Much of my early life was spent nearby the waterfront, and I came to appreciate not only the recreational and economic opportunities our coastal waters provided, but also how many livelihoods depended upon them. From my perspective in President Ford's Office of Communications, I was able to track the President's approval of the Magnuson Act, as well as his approval of the Coastal Energy Impact Legislation.

I gleaned additional insight into state fisheries problems and challenges during my tenure in the late Governor Dalton's Administration in Virginia. My knowledge of Virginia's seafood industry and its vital relationship to help me in recognizing the importance of fisheries to the Nation's as well as to the Southeast and the Gulf. I have an appreciation for the problems, drawing on my Virginia experience, of the types of challenges facing fisheries in the Southeast and the Gulf where estuarine-based fisheries are dependent on the health and quality of their waters. I had an up-close overview of the grave situation during which the James River commercial and recreational fisheries were shut down due to the discovery of high levels of kepone. The Dalton Administration successfully established the Virginia Graduate Marine Science Consortium to administer Sea Grant Activities for the State.

As Senator Warner's legislative director, my interest in policy areas expanded to include water resources management and other Federal resource management issues.

When I was a member of the senior management team of the U.S. Environmental Protection Agency, I had responsibility for communicating not only EPA's overall mission and program responsibilities to both Congress and the public, but also communicating individual program mandates for such statutes as the Clean Water Act, the Clean Air Act, and the Marine Resources Protection and Sanctuaries Act.

As I stated at the hearing, I view the Assistant Secretary's position principally as a management function, and, if confirmed, I would expect to continue to put a high premium on sensible and balanced fisheries management.

Senator LOTT. Do you view this as an environmental position that you are being nominated for?

Ms. WILSON. This is a management position, Senator. It is the Deputy Administrator of NOAA. I come to this position with, I think, a great deal of sensitivity to the difficulty of dealing with economic and environmental pressures. I think the Coastal Zone Management Act is one of those pieces of legislation that personifies that very difficult decisionmaking process. And largely, my responsibilities will be to assist the Under Secretary in the management of the entire agency.

Senator LOTT. When I was in the House of Representatives, I was a supporter of the Coastal Zone Management Act, but I think it is important that you approach this not from an environmental position.

Call it management if you want to, but it is environmental and economic. In the Gulf of Mexico, you know, we want to preserve our wetlands and our estuaries, and we have coastal zone management. We do not like long-lining by the Japanese and all those problems, but we also still depend upon fisheries, for instance, for our livelihood.

When our shrimpers, for instance, are forced to put this turtle excluder device on their fishing rigs or their shrimping rigs, it is a big problem.

So it really bothered me when I read your opening remarks as to the number of times you talk about environmental changes, global environmental challenges. I mean, I admit all of that, but also just remember, there are an awful lot of people that are depending on the seas, the ocean and the Gulf for their livelihood. I hope that you will keep that in mind, too.

Ms. WILSON. Absolutely.

Senator LOTT. In that connection, I have felt for many years that NOAA put a lot of emphasis on atmospheric considerations and that fisheries were kind of a stepchild over here.

Will you give me assurances that you are going to give the proper attention to the national marine fisheries that it is entitled to and that it will not become secondary to atmospheric considerations, because they are co-equal?

Ms. WILSON. Yes, sir, Senator. I can give you that assurance.

Senator LOTT. You worked with the Governor of Virginia, and you are in the Atlantic and the Gulf region of fisheries. Once again, for many, many, many years we were third string in fisheries. We were gobbled up by the Northeast and Northwest who got the lion's share of the money and the attention, both environmental and economic.

I hope that you will remember that you are from Virginia and that we are the third fisheries area, the Atlantic, South Atlantic and the Gulf, and we are co-equal with the Northeast and the Northwest and that decisions will not be made to benefit the Northeast and Northwest that are detrimental to the South Atlantic and to the Gulf.

Ms. WILSON. Yes, sir.

Senator LOTT. You will remember that, I hope.

Ms. WILSON. I will.

Senator LOTT. This is not an environmental position, in my opinion. I probably disagree with just about everything that I heard you being asked about when I came in. It is a management role, but there is so much that we can benefit from in the atmospheric area and in the fisheries area.

In my own area of the Gulf off of Mississippi and Alabama and Louisiana, we have the data buoy program. We do have NOAA programs, including fisheries. We have oceanography. I do not view these as environmental detriments. They are very big positives for our military, for development both in space and in the oceans.

I really feel that we need an ocean policy in this administration. We do not have one. We are putting all our emphasis on space, and we are not paying attention to ocean space usage. I would like to see the Bush Administration, through your leadership, develop a very aggressive ocean space policy usage. I am talking about using it, not preserving it. You can preserve it and use it, and I hope that you will give some thought to that in your new role.

Ms. WILSON. Senator, I very much look forward to engaging in more conversation with you about that and getting some more ideas from you. That might be something that we would very much like to work up with you. I know Dr. Knauss, the Under Secretary of NOAA, would feel similarly.

Senator LOTT. I know it has been a long time, and I wish you the very best. I would like to have a chance to talk to you further, and I look forward to working with you in the years ahead.

Ms. WILSON. Thank you very much, Senator. I appreciate that.

Senator LOTT. If there are no further questions, we will close this hearing. Thank you very much.

[Whereupon, at 2:55 p.m. the hearing was adjourned.]

[The following information was subsequently received for the record:]

POST-CONFIRMATION HEARING QUESTIONS
FOR
JENNIFER JOY WILSON
FROM
SENATOR DANIEL K. INOUE

1. I was most upset to learn that funds appropriated in FY 1989 for several projects being undertaken by the Oceanic Institute in Hawaii have not been released. The Oceanic Institute, a nonprofit marine research center established in 1960, is a most respected and diligent organization. The FY 1989 Commerce, Justice, State and the Judiciary Appropriations bill approved funds for three projects: 1. Hawaii Stock Management Plan; 2. Asian aquaculture exchanges; and 3. Mahi Mahi technology research. My staff has met with NOAA officials on this issue. Congressman Daniel Akaka and I have sent letters to NOAA relating to the disparate treatment of Oceanic Institute projects and the inexcusable delay in releasing the FY 1989 funds. Since these efforts failed to secure a release of these funds, report language was included, at my request, in the FY 1990 Commerce, Justice, State and the Judiciary Appropriation bill mandating that the FY 1989 funds be released for the Oceanic Institute projects. May I have your commitment that these funds will be released in an expeditious manner?

I understand that frequently, delays in issuing certain grant proposals are caused by inadequate documentation. The National Oceanic and Atmospheric Administration (NOAA) works hard to ensure that processing of applications is handled expeditiously. The Mahi Mahi proposal for \$400,000 is undergoing review. A

proposal covering an additional \$88,000 for the Mahi Mahi project has just been received and is being reviewed. On August 31, 1989, \$461,000 was awarded for the Hawaii Stock Management Research project. A proposal covering another \$400,000 for the Hawaii Stock Management project has just been received and is being reviewed. I am told the Oceanic Institute did not submit its proposal for the Asian Aquaculture Exchange program in time to be evaluated and processed by September 30, and carryover funding for it has been requested so that the proposal can be adequately considered this fiscal year. Funding for the Subarctic Fisheries Research project, in the amount of \$749,600 is in processing at the Grants Office. If confirmed, I will work to see that these allocations are processed in a proper and expeditious manner.

SENATOR INOUE

2. On September 20, 1989, Congressman Akaka and I sent a letter to NOAA Under Secretary John Knauss requesting a status report on NOAA's review of the Oceanic Institute's grant proposals for these projects. We requested that the report be prepared by October 15, 1989. When can I expect to receive a response from NOAA? What is the status of these grant proposals?

I am informed that you and Congressman Akaka should be receiving a response from Under Secretary Knauss within the next week. I am told a letter for Dr. Knauss' signature is in draft and currently completing clearance within NOAA.

I understand that the Oceanic Institute did not submit its proposal for the Asian Aquaculture Exchange program in time to be evaluated and processed by September 30, and carryover funding for it has been requested so that the proposal can be adequately considered this fiscal year. I am told that as the proper documentation is received in NOAA and the required processing proceeds, grants/cooperative agreements/contracts will be awarded in a timely fashion. Furthermore, NOAA will be pleased to provide bimonthly status reports beginning this month.

SENATOR INOUE

3. The Conferees on the FY 1990 Commerce, Justice, State and the Judiciary Appropriations bill also approved allocations for these same projects at the following levels:

Hawaii Stock Management Plan	\$400,000
Asian aquaculture exchanges	\$282,000
Mahi Mahi technology research	\$180,000

May I have your commitment that these FY 1990 funds will be released in a timely fashion and without the unreasonable delay the Oceanic Institute has experienced with the FY 1989 funds?

If confirmed, I will direct the National Marine Fisheries Service (NMFS) and other appropriate NOAA offices to work closely with the Oceanic Institute to see that these allocations are processed in a proper and expeditious manner.

POST-CONFIRMATION HEARING QUESTIONS
FOR
JENNIFER JOY WILSON
FROM
SENATOR JOHN KERRY

1. I understand that the position of Deputy Under Secretary has been expanded to include responsibility for NOAA's daily operations and administration. In the past, haven't these administrative responsibilities been the purview of the Assistant Secretary? What is the reason for the shift? Where does the position of Deputy Under Secretary fit into the hierarchy at NOAA?

During the course of NOAA's nineteen year history, various management structures have been employed to carry out the executive functions of NOAA. In general, these arrangements have reflected the backgrounds and management preferences of the senior incumbents in NOAA.

During Administrator White's tenure, (1970-77) the operational manager was the Associate Administrator. During Administrator Frank's tenure (1977-1981) the operations management functions were bifurcated between the Deputy Administrator (for marine matters) and the Associate Administrator (for atmospheric matters). During Administrator Byrne's tenure (1981-1985), the Deputy Administrator assumed day-to-day management responsibility. During Administrator Calio's tenure, he largely retained operations management responsibilities for himself. Under Dr. Evans (1987-1989), operational decisions were split among the Under Secretary/Administrator, the Chief of Staff, and the Assistant Secretary/Deputy Administrator.

Under Dr. Knauss' leadership of NOAA, the Assistant Secretary/Deputy Administrator will assume the duties of Under Secretary/Administrator in Dr. Knauss' absence, thus will not only assist in broad operational oversight, but will also be responsible for the management of NOAA's policy coordination and communication processes for NOAA, assisting the Under Secretary/Administrator in ensuring the mission requirements of NOAA are properly reflected in policy, program and budget decisions. Because of the scope and importance of these duties, the assignment of the day-to-day management responsibilities was made to the new Deputy Under Secretary. The Deputy Under Secretary reports to the Under Secretary, and in his absence, to the Assistant Secretary.

SENATOR KERRY

2. One area I am particularly interested in is Coastal Zone Management (CZM). As you know, the CZM program is a partnership in which the states pay half and the federal government pays half. I understand the Bush Administration is currently reviewing the program in anticipation of next year's reauthorization. Given that the President called for an "era of coastal awareness" in his budget message this year, is it safe to assume that the Administration will push for full funding for the program?

On September 27, 1989, in testimony before the House Merchant Marine and Fisheries Subcommittee on Oceanography and Great Lakes, the Under Secretary stated his commitment to provide leadership to improve the ability of CZM programs to address the critical coastal issues of today.

At present NOAA is developing recommendations for the Administration on Coastal Zone reauthorization. Senator Kerry, as I expressed to you during my confirmation hearing on October 25, I think it would be premature for me to try to indicate a level of funding or an exact piece of legislation that might be supported by the administration. However, I can assure you that we are very interested in getting your input. When the Administration position has been decided, clearly the issue of funding for Coastal Zone Management will be vigorously discussed between NOAA, the Department and OMB.

I can assure you that NOAA, the Department and I will be extremely aware of the President's commitment to an "era of coastal awareness" in these deliberations.

3. Both EPA and the Corps of Engineers have officially stated that as a matter of policy, they will comply with the designation of ocean dumping sites and the ocean disposal of dredged material. Do you believe this "voluntary" compliance with the law (Section 307) and NOAA's regulations to be correct? If not, what does NOAA intend to do about it?

I am advised by NOAA General Counsel that Section 307 (c) (1) of the CZMA states that "each Federal agency conducting or supporting activities directly affecting the coastal zone shall conduct or support those activities in a manner which is, to the maximum extent practicable, consistent with approved state management programs". NOAA has taken the position that any activities meeting these standards are subject to requirements of section (307) (c) (1).

I am aware that NOAA has stated this position on several occasions. NOAA's discussions with the Environmental Protection Agency have resulted in a new policy concerning the applicability of consistency to ocean dump sites, which NOAA believes is an appropriate attempt to resolve differences of opinion. I understand that NOAA is continuing to work with the Corps of Engineers to bring the Corps' program into full compliance with section 307 (c) (1).

SENATOR KERRY

4. There are several bills before Congress to better protect coastal water quality. I have introduced S. 1189 which would require state CEM programs to develop water quality programs focused on promoting best land use practices to reduce non-point source pollution. What do you think is the proper role of the national coastal zone management program in protecting coastal water quality?

While the incorporation of the water quality requirements of the Clean Water Act is a basic requirement for Federal approval of state coastal management programs, I am informed that water quality improvement was not a major focus of the CZMA when it was last reauthorized. Nevertheless, many states have made significant contribution to water quality improvement through programs developed as part of their coastal management efforts.

Over the years, the coastal management programs have developed expertise in the management of land uses and their impacts. The states also have in place the organization to implement these land management solutions to water quality. As Dr. Knauss has recently stated in his testimony before the Subcommittee on Oceanography and Great Lakes of the House Committee on Merchant Marine and Fisheries, water quality is one of the areas which needs renewed emphasis with reauthorization of the CZMA. I believe that the coastal management program can make a major contribution to water quality improvement.

SENATOR KERRY

5. At a hearing which I chaired on global climate change, several witnesses discussed the importance of NOAA's role in assessing and dealing with long-term environmental problems. Among the issues discussed was a recent report calling for a "rededication" of NOAA to meet the challenges of global environmental change. What do you think the priorities should be in "rededication" NOAA? How would such a rededication benefit the agency?

I concur with Under Secretary Knauss' commitment to reaffirm NOAA as the Nation's "earth systems agency". This requires that NOAA dedicate itself to demonstrate the intellectual and programmatic leadership required to develop the strong scientific foundation which will ensure an effective U.S. response to the economic, environmental, social and political issues associated with changes in the global environment. Specifically, Dr. Knauss is directing well-coordinated, agency-wide programs focused on the following high-priority responsibilities:

- o Fulfilling NOAA's role in the U.S. Global Change Research Programs;
- o Completing the modernization of this Nation's weather services;

- o Strengthening programs in coastal ocean science, services and resource management, including fisheries management, which is called NOAA's "Coastal Oceans Initiative", and
- o Significantly improving NOAA's capabilities as the Nation's primary source of environmental data and information services.

By focusing the agency's substantial and unique capabilities in these areas, I believe NOAA can, as recommended in the Report of the NOAA Panel on Climate and Global Change, "rededicete" itself to the original goal set forth in the 1970 Reorganization Plan which established the agency to provide a "better understanding of the total environment -- an understanding which will enable us to more effectively monitor and predict its actions, and, ultimately perhaps, to exercise some degree of control over them."

POST-CONFIRMATION HEARING QUESTIONS
FOR
JENNIFER JOY WILSON
FROM
SENATOR SLADE GORTON

1. Have you examined NOAA's budget? Are there areas you will recommend for increased funding next year?

I have examined NOAA's FY 1990 budget in some depth. This is being acted on, as you know, by the House and Senate as part of H.R. 2991, the State, Justice, and Commerce appropriations bill.

With respect to the coming fiscal year, the Department has finalized its recommendations which were forwarded to the Office of Management and Budget for consideration as part of the President's FY 1991 budget to be announced next year. While NOAA and DOC had completed their action prior to my nomination, I have been briefed on the NOAA submission. I can assure you that, if confirmed, I will work diligently within NOAA, the Department of Commerce, and the Administration to see that future budgets reflect the President's public commitment to the importance of the coast, our national fisheries resources, oceans and atmosphere.

SENATOR GORTON

2. Fisheries are very important to my region of the country. They are a multi-billion dollar industry. Will you travel to the Northwest to meet with our fishermen in an effort to familiarize yourself with these issues that you will manage at NOAA?

In brief, Senator, if confirmed I do intend to travel to the Northwest to familiarize myself with issues of interest to that region. I fully recognize the importance of the fisheries to the Nation as well as to the Pacific Northwest. If confirmed, I intend to be actively involved in the processing of policy development with all NOAA programs, including its important fisheries programs. Part of doing that job effectively will require that I gain first-hand knowledge of the issues from the constituencies affected, which I intend to do. I also respect the regulatory authority vested in the Magnuson Fishery Councils, and intend, under the leadership of Under Secretary John Knauss, to rely heavily on the expertise and local experience residing in the various Fishery Councils.

SENATOR GORTON

3. One of my top priorities is to seek a worldwide moratorium on driftnets. NOAA will need to work with the State Dept. and the Coast Guard on this issue. Have you begun to explore this issue yet? What role should NOAA play? Will you support a moratorium?

Yes, I have studied this issue in some depth and I can assure you, Senator, it is a priority of NOAA as well. I believe that Congress took a forceful, effective leadership role when it passed the Driftnet Act. That Act set up a process for both controlling and gathering information on the adverse effects of high seas driftnet fisheries on marine mammals, seabirds and salmon. NOAA has been working closely with the State Department and the Coast Guard to achieve the objectives of the Act, including the negotiation of three bilateral monitoring, assessment, and enforcement agreements with Japan, Taiwan, and S. Korea. The three bilateral agreements we recently concluded will help protect U.S. salmon resources from the driftnet fisheries. Each agreement also provides for a greatly increased level of data collection.

I feel that NOAA should continue its active role in driftnet negotiations. NOAA's enforcement efforts against illegal high seas salmon fishing have demonstrated the need to vigorously enforce our authority to protect anadromous species on the high seas; these enforcement activities must be continued. With respect to a moratorium, NOAA is assisting the State Department in addressing possible action at the United Nations. If confirmed, I expect to play an active role in developing our policy in this area.

SENATOR GORTON

4. You have served at EPA for the last four years. Several of EPA's and NOAA's programs overlap -- estuary management, coastal zone management, water quality issues, global warming. How do you think the agencies can effectively deal with these issues and avoid duplicative work?

There are areas of contrasting as well as complementary program activity within EPA and NOAA, which I view as an opportunity for closer coordination in scientific research, evaluation, and program implementation. Already in recent weeks NOAA and EPA have renewed a dialogue in such areas as wetlands protection, coastal ocean policy, marine damage assessment, and global climate change. The Administrator of EPA and the Administrator of NOAA met to renew mutual efforts in collaboration. Each agency has a great deal to offer the other in support of our respective missions, and I consider my experience at EPA as a tremendous enhancement to what, should I be confirmed, would be my responsibilities at NOAA. My considerable familiarity with EPA's legislative mandates and regulatory functions should be helpful to a better understanding between the two agencies.

NOMINATION—OCTOBER

FRIDAY, OCTOBER 27, 1989

U.S. SENATE,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
Washington, DC.

The committee met, pursuant to notice, at 10 a.m., in room SR-253, Russell Senate Office Building, Hon. Albert Gore, Jr. presiding.

Staff members assigned to this hearing: Pat Windham, Mike Nelson, and Becky Kojm, professional staff members; and Ruth Johnson, minority professional staff member.

OPENING STATEMENT BY SENATOR GORE

Senator GORE. The committee will come to order.

I want to welcome our witnesses and our guests. And let me say that I look forward to today's hearing on the nominations of James Wyngaarden and Thomas Ratchford to be Associate Directors of the Office of Science and Technology Policy.

If confirmed, as they no doubt will be, these two men will have important responsibilities in advising the administration on science and technology issues, and in coordinating these issues among federal agencies. I look forward to hearing their views on a range of subjects.

On July 21 we held the nomination hearing of Dr. Allan Bromley, who is joining us here today. And let me express my personal gratitude to you, Dr. Bromley, for rearranging your schedule in order to be here.

Last month we discussed the idea of having all four of the OSTP nominations considered together, which would have allowed us to address questions to the nominees and, with your presence, to review the subjects covered in our review of science policy. We have adjusted our original plan ever so slightly in order to accommodate your desire to have these two nominees confirmed now, and then consider the remaining two nominees.

So we are going to have an introduction from the Senator from North Carolina, Senator Sanford; then we will have a general introduction of the two nominees by you, Dr. Bromley. Both I and the committee will have some questions for you before we hear from the two nominees in order to accommodate your schedule, Dr. Bromley.

Now, I have an opening statement here, which I do wish to present, but I will withhold the rest of my opening statement in order to go first to Senator Sanford, who will introduce a mutual friend, if you please.

Senator SANFORD. Well, I do not really want to miss your statement.

Senator GORE. Well, I will go ahead and deliver it, if you want.

Senator SANFORD. Go ahead. I came to hear it.

Senator GORE. All right. I know you well enough to know that you mean that.

On July 21, we held the nomination hearing of Dr. Bromley. At that hearing and in 2 days of oversight hearings in late September, we saw both the growing importance of science and technology to the United States and the world, and the clear fact that our Nation faces major new challenges in the 1990s; challenges that require a strong response from federal science and technology policy and programs.

I am pleased that the President has accepted Dr. Bromley's advice to appoint all four of the OSTP associate directors permitted by the 1976 National Science and Technology Act.

This morning's hearing focuses on the two associate director nominations that have been forwarded to the Senate. Dr. Wyngaarden is well known to many of us from his earlier position as Director of the National Institutes of Health. And Dr. Ratchford most recently has served as Associate Executive Officer for the American Association for the Advancement of Science, one of the Nation's most distinguished scientific societies.

And I have had the opportunity to get to know you, as well, Dr. Ratchford, as you have worked in that capacity.

So, I, personally, and the committee generously welcomes both nominees to this committee, and look forward to receiving the other two nominations from the President.

Before we go to the statements from and questions to Dr. Wyngaarden and Dr. Ratchford, we will, as I mentioned earlier, hear from Dr. Bromley.

The committee will cover a range of issues this morning, from biotechnology to international science policy. And I am not going to go into issue in my opening statement, but I do want to make note of this fact: There are urgent questions for Dr. Bromley this morning, in light of recent reports of a key disagreement within the administration that threatens to leave our nation adrift on global environmental issues.

When Dr. Ratchford came in for a courtesy visit two weeks ago, I sent word back, insofar as this issue is partly within Dr. Ratchford's jurisdiction, and certainly within yours, Dr. Bromley, that I was concerned about the administration's position on global warning, and that I would have some questions about it.

Since that time we have had the public airing of a dispute in the administration about what our Nation's policy ought to be with regard to the global environmental challenge. We are told that White House advisors have dismissed the proposal by William K. Reilly, Administrator of the Environmental Protection Agency, to convene in the United States a meeting with officials from other nations to begin work on an international, global climate convention.

Those advisors apparently are only reluctantly allowing Mr. Reilly to attend another international meeting in the Netherlands, November 6 and 7. But they have made clear to him that he

cannot take with him a U.S. position that goes beyond recommending further study, and that he cannot invite anyone to come back to the United States for the meeting that President Bush once promised to convene, but now refuses to host.

It was barely six months ago that President Bush was promising that the United States would work for an international convention to confront the issue of global warming. During his campaign, President Bush said he would confront the greenhouse effect with the White House effect; "I intend to do something about it," he said. But today he refuses to act.

He says that Mr. Reilly goes to the Netherlands with his blessing. That is fine, but what about going with concrete proposals?

The new breeze that was blowing in May has turned into a cold wind in October. It was, after all, back in May, in a hearing before the science subcommittee of this committee that the Office of Management and Budget attempted to censor the testimony of one of our Nation's most respected scientists, so that his conclusions on the urgency of global warming would seem less so.

To douse the firestorm that followed when those attempts were made public, the administration unleashed a torrent of public promises and press releases that worked back then to put out the fire. But now, inattention and inaction are fueling a new blaze that press releases and promises will not control.

Now, public reports say the administration will not only refuse to provide leadership on these issues, it will even refuse to follow the growing number of countries now moving toward international agreements so essential to our future.

In the aftermath of the controversy in May, the President again promised this year to convene in the United States, a meeting to move to confront these issues. Well, the year is not over, but it is almost over, and it is now clear that that promise will not be kept.

Into the vacuum created by America's departure from the issue has stepped the small nation of Holland, offering leadership and convening an international meeting early next month that is looming large in this whole field.

Other nations around the world are going to the Netherlands to discuss meaningful proposals and meaningful actions. Our chief environmental officer in the United States feels that we should do so as well. Our secretary of state apparently feels that we should do so as well. But Mr. Sununu, and apparently others in the administration, have given the President contrary advice; advice which the President unfortunately has apparently chosen to accept.

We heard yesterday from one of the delegates to the meeting in the Netherlands, Dr. Knauss, that yet another meeting is scheduled in the White House on Monday to reconsider what our nation's position will be in the Netherlands.

There are those in the administration who recognize the dimensions of the crisis we face and understand the urgency of these issues. But there are others with louder voices and heavier hands who are at this point directing the course of the ship of state.

It is time we learned why and on what they are basing their decisions.

We are told that you, Dr. Bromley, have been put in charge of at least a key part of the policy process in preparing our position for

the Netherlands. So we will be exploring that this morning, along with the other issues that will be the responsibility of you and your assistants.

These unprecedented challenges to the global environment are very real and must be confronted. Because, in spite of all the revolutionary changes taking place in the world, politically, militarily, economically, it is still true that only the United States can provide the world the leadership so greatly needed on these issues.

And in spite of all the changes in the United States, it is still true that only the President of the United States can provide the leadership we need to move forward.

So these are some of the issues and questions that we will discuss this morning. And we look forward to the discussion.

I have a statement that Senator Hollings would like to have included in the record.

[The statement follows:]

OPENING STATEMENT BY THE CHAIRMAN

I am pleased that the Committee is holding this morning's hearing on the nominations of Dr. James Wyngaarden and Dr. Thomas Ratchford to be Associate Directors of the White House Office of Science and Technology Policy (OSTP).

Today our nation faces many critical needs and problems, ranging from economic competitiveness and defense to health and global environmental changes. Federal science and technology efforts, properly focused, can do much to help meet these urgent needs. For that reason, I want to see a strong and effective OSTP and a strong and effective Federal science and technology policy.

I am pleased that the President has now forwarded these two nominations to the Senate. For our part, we will move expeditiously to consider Dr. Wyngaarden and Dr. Ratchford, and today's hearing is an important step in that process. I look forward to reviewing their testimony and their answers to the Committee's questions. I also look forward to receiving the President's nominations for the other two OSTP Associate Director positions.

Senator GORE. Now, thank you, Senator Sanford, for your patience and forbearance. And the committee looks forward to your introduction of Dr. Wyngaarden.

STATEMENT OF HON. TERRY SANFORD, U.S. SENATOR FROM NORTH CAROLINA

Senator SANFORD. Thank you, Mr. Chairman.

As you know, that is a subject I, too, am interested in and am delighted to have the chance to share your views.

Certainly it is a great honor for me to come here to speak a good word for Dr. James Wyngaarden. He was a distinguished member of the Duke University Faculty, was when I came there, some 20 years ago, and I have had the pleasure of knowing him and watching him since that time.

We were distressed to see him leave Duke, but pleased that he would be coming to the National Institutes of Health, which is of such great importance to the future of this country, its science policy, its universities, and scientific research all over the country. He has played a major role in the NIH emphasis on extending its influence and in educating the public about health benefits resulting from biomedical research.

In his association with academia, the private sector, and voluntary and professional organizations, he has certainly done an outstanding job. While at NIH he also assisted in the coordination of a

large program in the structural biology of the AIDS virus, involving crystallography, electronic microscopy, and magnetic resonance imaging in a variety of physical and biological studies to determine the intimate structure of this virus.

I would simply say that he came there not expecting that kind of an epidemic and that kind of an emergency, and when he saw it, he jumped right on it and did all that he could to provide the leadership which he continues to provide not only here, but worldwide. That is the kind of scientist and the kind of administrator that he is.

He has received so many awards, including the Modern Medicine Aware for Distinguished Achievement, the John Phillips Memorial Award by the American College of Physicians, the North Carolina Medal—in fact, I made a mistake yesterday. I asked the White House to send me over his vitae, his biographical data, and it tied up my Fax machine all afternoon.

Dr. Wyngaarden is certainly one of the most distinguished scientists in America. There is a quality that he possesses that goes beyond just being a great scientist and an outstanding administrator: persistence.

A mother with two children with a rare skin disease called epidermolysis bullosa congenita contacted Dr. Wyngaarden and his staff and asked who was doing research in that area.

This is such a rare disease that NIH had not awarded a single grant for that particular disease. There were some grants in related areas, but none for that specific disease. With Dr. Wyngaarden's encouragement, this mother found other mothers whose children had this rare disease, formed a society, and appeared before Congress. As a result, a small program was established that has already made significant discoveries about the cause of that disease and working toward ways to properly treat it.

That is the kind of leader he is, the kind of compassionate leader that he is, the kind of scientist that I think will have so much to offer. We want to get him back to Duke University, but we are mighty pleased that in the meantime the White House and the Nation will have him. It is my pleasure to recommend him highly to this committee.

Senator GORE. Well, thank you very much, Senator Sanford.

And, Dr. Wyngaarden, as you know, you could not be introduced by a better champion, all the more so because of Senator Sanford's particular emphasis on science and technology here in the Senate and long before that as an educator and as a governor.

We appreciate your introduction, Senator. Thank you so much.

Senator GORE. Dr. Ratchford, I might say publicly what I told you privately, that you two have a senatorial champion who wanted to be here and introduce you, but Senator Robb, had a long-standing previous commitment. He was going to be here when this hearing was first scheduled, but when we rescheduled it, he could not break his other commitment. But his statement introducing you in glowing terms will be included in the record at this point.

[The statement follows:]

OPENING STATEMENT BY SENATOR ROBB

Mr. Chairman, I am pleased to add my support and congratulations to the President's nominee for the position of Associate Director of the Office of Science and Technology Policy (OSTP), Dr. J. Thomas Ratchford. Tom, OSTP Director Allan Bromley, and the three other Associate Directors will together be responsible for advising the President and for establishing priorities in science and technology for the nation. In this age of a global marketplace that is becoming more competitive and more technological every day, the opportunities are limitless.

Tom grew up in the Carolinas, but had the good sense to migrate to Virginia after graduating from Davidson College. He and his wife Joanne met while graduate students at the University of Virginia, where both received their doctorates. I am pleased the family tradition at the University, begun by Joanne's father, has continued with the graduation of their daughter from Virginia's Law School last May.

Following receipt of his Ph.D. in physics, Tom taught and did research in solid state physics at Washington and Lee University, located in one of the most beautiful sections of Virginia. His distinguished career has included a variety of important professional and scientific experiences. All of these have been marked by an intense involvement in the relationship between science, technology, and public policy. This is exactly the mission of OSTP, I might add.

Since 1977, Dr. Ratchford has served as an executive of the American Association for the Advancement of Sciences (AAAS), the world's preeminent multidisciplinary scientific society. His AAAS duties have not only involved close working relationships with the leaders of the mainstream U.S. scientific and engineering community, but have included interactions with similar leaders from around the world. This solid background in scientific research, education, and policy makes Tom an ideal nominee for this position in OSTP.

Mr. Chairman, the world of tomorrow will be increasingly technological in character. If we, as a nation, are to retain our leadership in the world economy and in national defense, we must prepare today for this new world. This means investments in research and development, and in math and science education. It means developing a national environment that values science and provides encouragement for our young people to enter scientific and engineering careers and to excel in those careers.

With the right leadership in OSTP, I believe the President and Congress will provide the resources the nation needs for nurturing and utilizing science and technology for the benefit of all our citizens. Mr. Chairman, I am confident that Dr. Ratchford and his colleagues at OSTP will provide that leadership.

Senator GORE. Now, Dr. Bromley, thank you again for the trouble you have gone to in order to attend today, and please proceed with your statement.

STATEMENT OF HON. D. ALLAN BROMLEY, DIRECTOR, OFFICE OF SCIENCE AND TECHNOLOGY POLICY AND ASSISTANT TO THE PRESIDENT FOR SCIENCE AND TECHNOLOGY, OFFICE OF THE PRESIDENT

Dr. BROMLEY. Thank you, Mr. Chairman.

I would like to begin, with your permission, by making a few remarks in Senator Robb's absence for the benefit of those in the room. Trained in mathematics and physics, Dr. Ratchford received his graduate education at the University of Virginia and his doctorate in 1961. He was educated and trained as a solid-state physicist.

He has taught at Washington and Lee University and has served on the research staff of various private and governmental laboratories; from 1964 to 1979 he was responsible for formulating and administering a basic research program in solid-state science for the Office of Scientific Research at the Department of the Air Force.

He served on the professional staff of the Committee on Science and Technology of the U.S. House of Representatives from 1970 to

1977 and, in fact, was one of the first scientists to serve on a full-time basis in staff to the Congress.

His responsibility here dealt mainly with policy, with funding for science and with energy research and development. He was a Congressional Fellow of the American Political Science Association. During 1968 and 1969 he served in the offices of Senator Gordon Allott and Representative Emilio Daddario—members of the Senate and House with particular interests in scientific and technological issues.

Since 1977 Dr. Ratchford has served as associate executive officer of the American Association for the Advancement of Science, where he heads three program directorates, those of education and human resources, of international programs in science and of policy programs.

He also recently completed a 3-year term as Chairman of the National Science Foundation's Advisory Committee on International Programs.

I had the pleasure of working closely with Dr. Ratchford during my term as President of AAAS in the early 1980s and on numerous panels and committees since that time. I can think of no one with background and experience more appropriate to the role in OSTP for which President Bush has nominated Dr. Ratchford. I support his nomination enthusiastically and would most respectfully request, Mr. Chairman, that you and your colleagues confirm him in that position.

I would also, Mr. Chairman, like to say that again, I can think of no individual better qualified through background and experience for the role of Associate Director for the Life Sciences in OSTP than Dr. James Wyngaarden, and I would be most happy to associate myself with Senator Sanford's remarks.

I, again, would support Dr. Wyngaarden's nomination with enthusiasm and would respectfully urge that you and your colleagues confirm him in that position.

As you noted, sir, during my confirmation hearings in July, I emphasized that I was searching for four associate directors distinguished in their own right, but who would also have the personalities and temperament that would allow us together, as senior members of OSTP, to address the problems and opportunities that we encounter in a truly collegial fashion bringing all of our experience and expertise to bear.

I can assure you, Mr. Chairman, from personal experience, that Drs. Wyngaarden and Ratchford fully meet that criterion as indeed do the other two outstanding individuals whose names the President will shortly place in nomination for the other two associate directorships, those in physical sciences and engineering and in industrial technology.

I look forward, Mr. Chairman, to having my full senior staff in place and to following through on the promise I made to you in my confirmation hearing with respect to our meeting jointly with you and your colleagues for a full discussion of science technology policy and other issues of mutual interest and, in fact, working with you on a continuing basis on these very important topics.

That ends my comments.

Senator GORE. Well, thank you very much, Dr. Bromley, and I want to congratulate you on these two nominations. We will have some pointed questions for the nominees, and there is at least one controversy involving biotechnology that we need to explore in some depth, but I want to congratulate you on the nominations, and I want to thank you for keeping in close touch with the subcommittee and with the committee. Indeed, you have followed through on your part of our discussion earlier about developing a good working relationship to try to improve our handling of science and technology policy.

At the hearings on your confirmation and in subsequent discussions I have tried to make clear that my generally favorable response to your statements and activities is or has an exception, and that is on the issue of global warming. I said in the original hearings that I was disappointed with the approach you articulated at that time.

It may be that the very views which caused me some disappointment were attractive to Mr. Sununu in his decision to appoint you chairman of the working group in preparation for the Dutch meeting.

I do not know if that is the case, but I want to explore how our nation and how your office is preparing for that meeting.

The meeting is to be held in the Netherlands on November 6 and 7, and it is a conference on climate change and atmospheric pollution, is that correct?

Dr. BROMLEY. Correct.

Senator GORE. You will be a member of the delegation to that conference, and the delegation is to be led by Mr. Reilly, is that correct?

Dr. BROMLEY. That is correct, sir.

Senator GORE. Now, you have, indeed, been appointed as chairman of a working group of the White House Domestic Policy Council, is that correct?

Dr. BROMLEY. Correct.

Senator GORE. Mr. Sununu asked you to chair that working group?

Dr. BROMLEY. The President and Mr. Sununu, sir.

Senator GORE. Now, reports in the press state that the working group you now chair rejected a proposal by Mr. Reilly to use the ministerial meeting as an opportunity for the United States to invite representatives of other nations to come here next year to begin meeting on an international convention on global warming, is that correct?

Dr. BROMLEY. As you will agree, Senator, the deliberations of the Domestic Policy Council are, by their very nature, normally confidential and leaks tend not to be terribly reliable; I am entirely prepared to discuss the general matters under discussion, but I cannot tell you details of that particular meeting.

Senator GORE. The reports which did leak indicated that the group you chaired opposed the United States even attending the meeting in the Netherlands. Do you think it is a bad idea for the United States to attend that meeting?

Dr. BROMLEY. If I may, Mr. Chairman, I would like to back up and provide just a little background before answering that specific

question. I would want to expand a little on the charge that you have attributed to our working group.

It was not specifically formed as a prelude to the Hague meeting. It is rather formed on a continuing basis to try to develop a government-wide policy for addressing problems that I agree with you are enormously important—to get a solid governmental position that is based on the best scientific understanding that we can develop. It is not a one-shot study.

Senator GORE. I welcome that clarification. In my earlier statements what I meant to imply is that you were named chairman of this working group to develop U.S. Government wide policy toward global climate change.

Dr. BROMLEY. That is correct.

Senator GORE. The formation of the group came at the time the executive branch was reacting to the request for a delegation to attend the meeting in the Netherlands. What you are saying is that, of course the group has a much broader responsibility than simply deciding how we react to the invitation from the Netherlands.

All right, go ahead.

Dr. BROMLEY. May I also add, sir, that the discussion of the formation of this group was not something in the immediate past. It has been under discussion for a considerable period. The actual formation, however, did take place in the recent past, and so there is the coincidence of time. But I would not want anyone to draw any specific conclusions from that coincidence.

Senator GORE. Now, I had been under the impression that Mr. Reilly was in charge of developing for the administration our response to global warming. Is that in error?

Dr. BROMLEY. I believe, sir, that there was no formal mechanism that was government-wide, in place, prior to the development of this working group. And that is certainly the charge that we have been given, to make sure that it provides a forum for discussion that involves all of the interested parties government-wide.

Senator GORE. All right.

Dr. BROMLEY. Now, you have asked specific questions about what went on at the first meeting of that working group, which occurred a week ago. And all I would be able to say, sir, is that both Mr. Reilly and I will be attending The Hague meeting. I will be a member of the delegation led by Mr. Reilly. And Mr. Reilly, in fact, will be chairing a meeting this coming Monday, which will serve as a forum for addressing specifically what our approach will be at The Hague meeting.

Senator GORE. Is that meeting in the White House?

Dr. BROMLEY. No. That will be at Mr. Reilly's office.

Senator GORE. Now, do you think it is a bad idea for the United States to attend the Dutch meeting?

Dr. BROMLEY. This is a question that was discussed, and there was a difference of opinion. But, specifically, sir, I want to take a positive point of view. I concur with your statement that the Dutch are taking real leadership.

Their process, however, sir, is in parallel with the one that we were instrumental in establishing under the United Nations aegis, the IPCC process that you are of course fully familiar with. That

process is underway at the present time. As you know, there are three major working groups. We in the United States are chairing the one on response to global change. The United Kingdom is chairing the group that is studying the scientific underpinnings of the question. And the Soviet Union is chairing the third group, which is addressing, if you like, consequences and effects of global change.

Now, it turns out that all of those are in process. I think ours is somewhat ahead of the other two. But it is our hope that by the end of this coming summer we will at least have drafts, and by the end of calendar 1990, we will have the final reports from these three groups, which we have been supporting fully from the beginning.

It is our belief and intention that it is important for us to have the results of those three working groups before moving forward.

Senator GORE. So, I get the impression from your answer that you did not think it was a good idea for the United States to go to the Dutch meeting, but now that we are going, you are going to put the best face on it. But you remain concerned that the Dutch meeting might push us and others in the world toward some premature action in a process that is unnecessarily duplicative of the IPCC process, which the United States is helping to manage.

Is that a fair summary?

Dr. BROMLEY. It is certainly true, sir, that I believe that we are committed to supporting fully the IPCC process. That in no way, however, means that we should not be interested in and supportive of other activities. And I think that the problem, as you quite correctly say, sir, is sufficiently serious that it deserves the best efforts of all of us.

The thing that I think definitely will underline the U.S. position, however, is that we wish to be sure that any action that we undertake—and I would emphasize that we already are undertaking a number of actions that are very much in line with our shared views—but that we are not going to undertake major items unless we are convinced that they have a strong scientific underpinning and foundation.

Senator GORE. Okay. Let me come back to that.

But you do not challenge the rest of my summary, do you, that you were opposed to attending the Dutch meeting, but now that it is occurring, you want to put a positive light on it?

Dr. BROMLEY. I would take some issue with that, sir. First of all, I think that it would be quite improper of me to report in detail what my position was in a particular meeting of the Domestic Policy Council. And second, I think that to characterize the fact that I am going to The Hague with every intention of participating fully, as putting the best face on the situation, is not entirely fair.

Senator GORE. All right. I was indeed attempting to get from you information that you had asked not to provide in response to an earlier question, but I thought if I phrased it that way you might feel a little more comfortable in making public what most people suspect is indeed the truth.

Now, the IPCC process, which you believe is the better way to proceed, led to a meeting in Geneva just two weeks ago. Is it not correct that the United States was the least willing to move toward

policy responses at that meeting and the most insistent upon emphasizing further research in advance of action?

Dr. BROMLEY. First of all, sir, I was not at that meeting, and so I cannot comment on all aspects of it.

Senator GORE. Well, you are now in charge of this policy for the executive branch.

Dr. BROMLEY. Quite right, sir. I am in charge of developing policy for the U.S. Government.

I was not at the meeting in Geneva, and I do not know all the discussions that went on there. However, I think again that it is not entirely fair to characterize the U.S. position as being the most—or let us say, rather, the least enthusiastic of those present.

Senator GORE. Well, those were the reports which came back to the United States from that meeting. But, now, let me pursue this working group a little bit more.

The members of the working group include, in addition to OSTP, the Departments of Energy, Commerce, Interior, State, and the Office of Management and Budget, the EPA, the CEQ, and the Council of Economic Advisors. Is that correct?

Dr. BROMLEY. I believe that is the list at the moment, sir. But that list is still in the process of evolution, and other members will be added.

Senator GORE. How frequently will this working group meet?

Dr. BROMLEY. As I emphasized earlier, sir, we have only held one meeting as yet, and the procedures are still evolving. But my anticipation is that it will be perhaps something on the order of twice a month.

Senator GORE. All right.

Now, in discussing the meeting in the Netherlands, was it your understanding that the Dutch conference is designed to look into energy policy and carbon dioxide emissions reductions?

Dr. BROMLEY. Those are among the issues that will be discussed.

Senator GORE. And in addition, funding mechanisms for supporting climate policies and the elements of a climate convention? I met last week with Mr. Ed Niples, the Dutch minister of the environment.

Dr. BROMLEY. Those are all elements of the program.

Senator GORE. Now has our position at the Dutch meeting been resolved yet?

Dr. BROMLEY. No. As I said, sir, we are meeting on Monday for precisely that purpose.

Senator GORE. Now, your feeling—well, let me quote to you what President Bush said after the G-7 meeting in Paris. It is from the declaration that he signed at the conclusion of that meeting. "Decisive action is urgently needed to understand and protect the Earth's ecological balance. We strongly advocate common efforts to limit emissions of carbon dioxide and other greenhouse gases, which threaten to induce climate change, endangering the environment and ultimately the economy."

"We believe that the conclusion of a framework or umbrella convention on climate change to set out general principles or guidelines is urgently required to mobilize and rationalize the efforts made by the international community."

Now President Bush signed those words and then hailed it as, in his words, a watershed on the environment. We agreed that decisive action is urgently needed to preserve the Earth. We are committed to work together, as well as with the developing world, to meet our responsibility of global stewardship.

Now, that seems to imply that the President believes we urgently need a convention on global climate change and common efforts to limit emissions of carbon dioxide and other greenhouse gases.

Do you agree with that?

Dr. BROMLEY. I believe that is a fair statement of the President's position. But I would emphasize, sir, that we are, as you well know, talking about programs. Once we talk about limiting carbon dioxide, for example, we are talking about programs that will have substantial economic consequences that are not yet known.

And I think I can emphasize to you that one of the major goals of this working group that I chair will be that of trying, as quickly as possible, to do a number of things. One is to draw on the best and brightest people we have in this country to understand some of those aspects.

Much of the discussion so far, sir, has been focused on the input side of the global change equation. How can the changes come about? What magnitude might they have? Less attention has been focused on, what would the consequences of those changes be were they to occur? And, what would the economic consequences be?

I am hoping and, in fact, can assure you that we will first of all draw on a largely untapped resource we have in this country in the private sector. The private sector has been relatively little involved in our global change discussions thus far, and just as in the government arena, where we really have a leadership position and have had one for many years, the same is true in the private sector.

I want to get the benefit of that. We want to understand the economic consequences of the various possible courses of action before us. And the statement that you have quoted that the President signed, I believe, still is a very fair representation of his view. It is simply that the President believes strongly that our action should be based on an understanding of the science involved and at least the best understanding we can get of the economic consequences, and that we should not move forward until such time as the IPCC process has worked its way through to completion.

Senator GORE. I think it is important that we be very clear about this. What you are saying is that you disagree with the statement signed by the President that came out of the Paris summit. You believe it is premature to limit emissions of carbon dioxide and other greenhouse gases and premature to enter into a framework or an umbrella convention on global climate change; is that correct?

Dr. BROMLEY. That is not what I am saying, sir.

I clearly am agreeing with the position taken by the President. It is simply a question of definition of urgent.

I submit to you most respectfully, sir, that in matters of this potential consequence we should not move without the best understanding we can get and we have a process in place to obtain an understanding in the IPCC process.

Senator GORE. So what you are saying is that we do not yet know enough about the seriousness of the problem and the consequences of solutions to that problem to justify limiting the emissions of greenhouse gases now or entering into a framework convention now?

Dr. BROMLEY. As I said before, sir, until the IPCC process works its way through, we will not have the benefit of their deliberations. I think those deliberations are important and deserve to be factored into our actions. I believe the President agrees with that.

I wanted to emphasize that particularly in the global warming area, we have in this past few months had some rather major changes, as you, I think, know as well as I. Mitchell and his colleagues with the Meteorological Office in the United Kingdom have for the first time put in clouds in the global climate models on more than a simple relative humidity basis where they really include the possibility of having ice crystals as well as water droplets.

What emerges from just that simple change is that the predicted temperature increase from a doubling of the carbon dioxide in the earth's atmosphere decreases from 5.2 degrees to 2.7. If one makes even a minor modification still on the cloud effects in terms of their albedo, you drop it to a prediction of 1.9 degrees.

The fact that such relatively simple and obvious changes in our models can make such major changes in predictions underscores, I think, my own feeling and that of many of my colleagues in the scientific community, that we have a substantial distance to go yet, and this is what the IPCC group chaired by the United Kingdom is attempting to produce for us. It was through, in part, their stimulus, that this work was carried out in the U.K. Meteorological Office.

Senator GORE. Now that is 1.9 Centigrade; is that right?

Dr. BROMLEY. Yes.

Senator GORE. So you are reassured that recalculations in the model lead you to believe that the increase may be as little as 3.5 degrees Fahrenheit?

Dr. BROMLEY. Sir, I do not know. What this simply tells me is that I do not know with any degree of certainty what the proper scientific result is yet. I simply am saying that this illustrates the uncertainty of the prediction we have available.

Senator GORE. You think we need to resolve that uncertainty before we enter into a framework convention?

Dr. BROMLEY. Well, I believe it is important for the IPCC group, for which this is simply an illustration, to complete their work in a professional fashion.

Senator GORE. So you think the IPCC process ought to be allowed to continue and make the efforts now under way to resolve these uncertainties you point to before we enter into a framework convention and before we begin reducing greenhouse gas emissions? Is that a fair statement?

Dr. BROMLEY. It is my understanding, sir, that we committed formally, on behalf of the United States, when we entered into the IPCC process that we would, in fact, move through a very carefully spelled out process which had our three working groups in action.

They are in action. It would be inappropriate for us to preempt their conclusions before they finish their studies.

Senator GORE. Okay. Now I am trying to get you to answer the question, Dr. Bromley, on this simple point.

Do you believe that it is inappropriate for us to enter into a framework convention or begin reducing greenhouse gas emissions prior to the conclusion of the research under way in the IPCC process?

Dr. BROMLEY. I believe, sir, that we are committed as a Nation to allowing—

Senator GORE. No, I am asking for your opinion, Dr. Bromley, not your understanding of the Nation's international agreements or obligations or what it said in the IPCC meeting.

I am asking for your opinion.

Dr. BROMLEY. My personal opinion, sir, is that we should have the best scientific understanding we can possibly obtain before we undertake major programs.

Senator GORE. You believe that we do not yet have sufficient scientific understanding of global climate change to justify either a framework convention or reductions of greenhouse gas emissions; is that correct?

Dr. BROMLEY. Not quite correct, sir. What I said when I came before you in July was that there are many areas where we can in fact and, I believe, should take action and in which I believe we should take aggressive action right now. These are cases where we have other arguments, other reasons for taking action that will in fact reduce greenhouse gas emission. I mentioned some of them.

If I may, I would remind you one is aggressive energy conservation. There are many reasons that support that. One is reforestation wherever it is appropriate. One is doing everything we can to retain what is left of the tropical rainforest. Then domestically we have made a number of moves, sir, in which you have been a leader: clean air; and automotive mileage standards are two examples.

We can go through a whole list of areas where we have really taken a leading position in the entire world. We are already taking action to do many of these things.

Senator GORE. Okay, Dr. Bromley. Let me try again on the question of a framework convention. The issue before your working group has been when and whether the United States should enter a process to create a global convention on greenhouse gas reductions. Now let me try to state your view, and then you correct it where it is wrong.

My understanding of what you are saying is that you believe it would be wrong for the United States to begin working on a framework convention now because the scientific evidence does not yet give us sufficient certainty to justify a framework convention. Is that fair or unfair?

Dr. BROMLEY. I am afraid, sir, that is not my position. Let me try again if I may, sir.

Senator GORE. Sure.

Dr. BROMLEY. There are two aspects here. The first is the framework convention. The second is the question of major activities of an amelioratory nature. In terms of the framework convention, I

believe that we have made a commitment, and as a member of this administration I feel that I am bound to that commitment to let the IPCC process work its way through in a professional fashion to conclusion.

Senator GORE. That is not a framework convention. You are mixing up two commitments, with all due respect. The first was the one you keep referring to with regard to letting the IPCC process work its will.

The second commitment is the one made by President Bush at the conclusion of the G-7 summit.

What you are saying here is in contradiction to what President Bush agreed to in the statement in Paris.

Dr. BROMLEY. With all respect, sir, I would have to differ.

May I also complete the other half of the first statement?

Senator GORE. Surely.

Dr. BROMLEY. I said that the first part had to do with the commitment that this administration had made, which I feel I support without question.

The second thing has to do with the question of undertaking major programs to limit the emission of greenhouse gases beyond those for which we have other arguments, other compelling arguments.

My belief is that we should not move forward on major programs until we have a reasonable understanding of the scientific and economic consequences of those programs.

Senator GORE. So as a result, you believe it would be wrong for the U.S. delegation in the Netherlands, a delegation of which you will be a member, to actively discuss at that conference our views on the elements of a global climate convention? You believe that would be premature?

Dr. BROMLEY. It would be improper for me, sir, to arrive at or to tell you of a conclusion of that sort on my part prior to the meeting we are holding on Monday to arrive at an official position at a delegation to which I will be a member.

Senator GORE. If you are now in charge of the executive branch policy and you are asked a question about your personal views about that policy, why is it improper for you to give those views?

Dr. BROMLEY. Because I will be bound by the results of our deliberations on Monday rather than by any personal views that I might take into that meeting on Monday.

Senator GORE. Does that mean that you have a constitutional right to avoid the embarrassment which might result from a difference between your personal views and the outcome of that meeting?

Dr. BROMLEY. Not at all, sir, but when I go into a meeting of this sort with a group of distinguished colleagues, I expect to learn from that meeting. So I do not go in with a total preconceived view.

Senator GORE. So you have no view on that question?

Dr. BROMLEY. That is not the same thing, sir.

Senator GORE. Well, what is your view on that question?

Dr. BROMLEY. My view is that I will listen to the discussion on Monday and at that time will decide with my colleagues what our official view will be as we arrive in Hague.

Senator GORE. Let me conclude my round of questions with just one final brief line. I appreciate the indulgence of my colleagues.

Do you believe that the doubling of carbon dioxide in the atmosphere which will occur within the next 40 years or thereabouts compared to preindustrial levels is likely to result in global warming?

Dr. BROMLEY. I believe, sir, that it is certainly possible and probable to some degree, but that is as far as I can say on the basis of the evidence. The most recent calculations to which I just referred showed a decrease by a factor of two and more by the first simple correction that has been suggested to those models.

So my answer would have to be that I simply do not know, sir.

Senator GORE. The model you referred to after corrections says only 3.5 degrees Fahrenheit worldwide. Is that reassuring to you?

Dr. BROMLEY. That number is not reassuring to me.

The fact is, sir, that any model can have its results changed by factors of two. It happens to be downward in this case, but it might be upward in the next correction. Until some of these additional corrections are in and evaluated, as a scientist I simply do not know what the results will be to within a very large uncertainty.

Senator GORE. If it were only a matter of intellectual curiosity, the Nation could afford infinite delay and procrastination and further research to resolve every last uncertainty.

You are now in charge of helping to decide whether or not we should do anything. Since the consequences of doing nothing may very well be catastrophic changes to the global environment of a larger magnitude than any we have seen in the last 50,000 years, the consequences are not nearly intellectual.

What is your view of the record of carbon dioxide concentrations and temperature variation in the ice cores? You are familiar with that record, are you not?

Dr. BROMLEY. Yes, I am.

Senator GORE. As the CO₂ concentrations went up and down the temperature went up and down in exact conformity for the last 160,000 years, correct?

Dr. BROMLEY. That is correct.

Senator GORE. Do you believe that is a coincidence?

Dr. BROMLEY. No.

Senator GORE. The highest concentrations during the last interglacial period were approximately 300 parts per million, correct?

Dr. BROMLEY. That is correct.

Senator GORE. They are more than 350 parts per million now, correct?

Dr. BROMLEY. That is correct.

Senator GORE. Do you believe that there is a strong likelihood that the connection which has been exact for the last 160,000 years is no longer valid?

Dr. BROMLEY. No sir, I do not. But may I answer, I agree with you entirely on the point that this is not a matter of intellectual curiosity. As I emphasized, we are talking about a matter of only months until such time as the IPCC process completes—

Senator GORE. No, we have been talking more than a year and other nations in the world are moving toward action and they are

asking, why is the United States, the only Nation which can really lead the world, dragging its feet?

But let me come back to this question, and I want to wrap this up quickly here. If you believe it is likely that the connection we have seen for the last 160,000 years is still valid, and if we are continuing to increase CO₂ concentrations at the rate of two and a half parts per million every year, and if the concentrations are now significantly higher than at any time we can measure in the geological record, how high do you believe the concentrations of CO₂ should be allowed to get before that alone justifies action to reduce emissions of CO₂? It is over 350, about 354 now. How high would you allow that to get before you felt that that alone justified action?

Dr. BROMLEY. May I make two points, sir? First of all, you have repeated the assertion that we are taking no action. I would submit to you, sir, that that is not the case. We are taking action and I have listed a number of the actions that we are taking.

Senator GORE. Just briefly, what were those?

Dr. BROMLEY. We have, for example, the simple ones first: clean air, mileage limitations on our automobiles.

Senator GORE. What limitations are those?

Dr. BROMLEY. We have increased the CAFE standards to 27.5 now.

Senator GORE. The Administration is opposed to increasing that.

Dr. BROMLEY. But it has happened.

Senator GORE. Okay, go ahead.

Dr. BROMLEY. So in fact—I take “we” in the more global sense, sir.

Senator GORE. Wait a minute, you just refused not to roll them back. You did not increase them. But go ahead. What are the other actions that were taken?

Senator ROCKEFELLER. Mr. Chairman, some of us have further obligations.

Senator GORE. Let me apologize, Senator Rockefeller. Let me finish this one minute. Go ahead.

Dr. BROMLEY. We are actively working now on energy conservation. The Department of Energy has major activities underway there. We are working now toward a reforestation in a number of areas. We are certainly discussing, in every way we can with our colleagues who are in possession of the tropical forests to come up with some kind of an arrangement which will prevent their destruction. Those are, I think, important actions that are underway and so on that case I think it is unfair to say that we are taking no action. We are taking some action. What we are not doing yet is taking major actions targeted directly, and for no other reason than because of the CO₂ question, and my answer to the second part of your question is that given the uncertainty in all of the modeling with which I am familiar, I simply cannot answer your question of what would be the level of CO₂ where something dramatic would happen. I do not know.

Senator GORE. All right. I will come back to it if we have time. I apologize to my colleague, Senator Rockefeller.

Senator ROCKEFELLER. Dr. Wyngaarden and Dr. Ratchford, in my judgment, I just want to make it clear that I think you are both

superbly qualified for nomination. There are two other associate directors that still need to be nominated and I hope that those nominations will be forthcoming, but if they are at the level of these two gentlemen I will be more than happy.

Dr. Wyngaarden, we have a very interesting situation in this country now where the cost of medicine is growing so rapidly, in the case of Medicare, 17 percent a year. There was a freeze in 1984 and 1985 which was put on doctors' fees, yet they still rose by 10 percent and some would even say that health care is that area of our national life which could be the backbreaker in terms of the budget. So clearly we have to get the public budget under control and yet at the same time increase access and not compromise on quality and that, obviously, is a very large order.

One of the ways to do this is to find out what is appropriate care and what is inappropriate care, what is necessary care and what is unnecessary care, and depending upon who you are talking to you get estimates that perhaps up to 30 percent of medical procedures which are done are not necessarily appropriate.

Now, that is not necessarily the fault of doctors entirely, because liability—medical liability causes defensive medicine and you know all of that.

In any event, one of the things that is really critical in order to be able to develop practice guidelines is an aggressive approach towards outcomes research. That is to measure with your office and with physicians groups, et cetera, what it is that is needed and to what extent is liability involved and to what extent is that being used by physicians as an excuse, and the only way you do that is by outcomes research.

There is a bill before the Congress called the Physician Payment Reform Bill, which deals basically with Medicare but which has much broader implications. I think the key to all of this in the future is going to in fact be outcomes research which leads to practice guidelines. I would generally like to have your own instincts as to how you see that problem and how you see yourself being involved with that type of pursuit?

[The biographical sketch and question and answers follow:]

COMMITTEE ON COMMERCE, SCIENCE,
AND TRANSPORTATION

WASHINGTON, DC 20510-6128

(If more space is needed, please use attached REMARKS sheet)

A. BIOGRAPHICAL DATA

1. Name: WYNGAARDEN James Barnes
(Last) (First) (Other)
- Address: 3322 Dent Place, N.W.
(Current residence) (Business)
- Washington, D.C. 20007
2. Position to which Science and Technology Policy
nominated: Associate Director, Office of
Executive Office of the President Date of nomination: October 2, 1989
3. Date of birth: October 19 1924 Place of birth: East Grand Rapids, Michigan
(month) (day) (year)
4. Marital status: Divorced Full name of Spouse: _____
5. Names and ages of children: Patricia W. Fitzpatrick 41 Lisa W. Rolland 35
JoAnna W. Gandy 38 James B. Hynngaarden, Jr. 31
Martha W. Krauss 27
6. Education:

Institution	Dates attended	Degrees received	Dates of degrees
<u>Calvin College</u>	<u>9/42-6/43</u>		
<u>Grand Rapids, Michigan</u>			
<u>Western Michigan University</u>	<u>7/43-6/44</u>		
<u>Kalamazoo, Michigan</u>			
<u>University of Michigan</u>	<u>6/46-8/46</u>		
<u>Ann Arbor, Michigan</u>			
<u>University of Michigan</u>	<u>9/44-5/48</u>	<u>M.D.</u>	
<u>Medical School, Ann Arbor, MI</u>			

7. Employment record: List all positions held since college, including the title or description of job, name of employer, location of work, and dates of inclusive employment.

From	To	Name of employer	Address	Type of work
1946	1948	Univ of Michigan Med School	Ann Arbor, MI	Research Asst in Pharmacology
1948	1949	Massachusetts Gen Hospital	Boston, MA	House Officer (Intern)
1949	1950	Massachusetts Gen Hospital	Boston, MA	Asst Resident in Medicine
1950	1951	Massachusetts Gen Hospital	Boston, MA	Asst to Dr. Walter Bauer (Arthritis Practi.)
1951	1952	Massachusetts Gen Hospital	Boston, MA	Resident in Medicine
1952	1953	Public Health Research Institute of City of New York	New York, NY	Visiting Investigator (under Dr. DeWitt Stettin)
1953	1954	Lab of Chem Pharmacology Natl Heart Institute, NIH	Bethesda, MD	Investigator

(continued under REMARKS)

3. Government experience: List any experience in or direct association with Federal, State, or local governments including any advisory, consultative, honorary or other part-time service or positions.
- Consultant to Surgeon General, U.S. Public Health Service, Cardiovascular Study Section, 1958-1960
- Consultant to Surgeon General, U.S. Public Health Service, General Medicine Study Section, 1960-1963
- Consultant to Surgeon General, U.S. Public Health Service, Medical Scientist Training Committee, Chairman, 1967-1969
- Member, Advisory Committee on Biology and Medicine, U.S. Atomic Energy Commission, 1966-1968
- Consultant to Office of Science and Technology, Executive Office of the President, 1966-1972
- Member, National Institute of Arthritis and Metabolic Diseases, Board of Scientific Counselors, 1971-1974

President's Science Advisory Committee, Washington, D.C. 1972-1973

(continued under REMARKS)

9. Political affiliations activities: List all memberships and offices held in or financial contributions and services rendered to all political parties or election committees during the last 10 years.

Registered as Democrat in North Carolina. No political activities. Small contributions to: Governor Hunt's campaign in 1980 (\$100); Terry Sanford for Senate in 1986 (\$250); Silvio Conte Fund, University of Massachusetts in 1987 (\$100); Lowell Weicker Fundraiser in 1987 (\$100); Terry Sanford for Senate in 1988 (\$100); Edward Kennedy Campaign in 1988 (\$150); David Price for Congress in 1988 (\$100); Lowell Weicker Fundraiser in 1988 (\$250).

H. REMARKS

7. EMPLOYMENT RECORD (continued):

1954	1956	National Institute of Arthritis & Metabolic Diseases, NIH	Bethesda, MD	Clinical Associate
1956	1959	Duke Univ Medical Center	Durham, NC	Assoc Prof of Medicine Assoc Prof of Med & Biochemistry
1959	1961	Duke Univ Medical Center	Durham, NC	Prof of Medicine & Assoc Prof-Biochemis
1961	1963	Duke Univ Medical Center	Durham, NC	Prof of Medicine & Assoc Prof-Biochemis
1963	1964	Institut de Biologie- Physiochemique (sabbatical)	Paris, France	Visiting Scientist Prof of Medicine & Assoc Prof-Biochemis
1964	1965	Duke Univ Medical Center	Durham, NC	Chair, Dept of Med & Prof-Biochemistry
1965	1967	University of Pennsylvania School of Medicine	Philadelphia, PA	Hanes Professor & Chair, Dept of Med
1967	1982	Duke Univ Medical Center	Durham, NC	Chair, Dept of Med
1982	8/89	National Institutes of Health	Bethesda, MD	Director

8. GOVERNMENT EXPERIENCE (continued):

Consultant to the Food and Drug Administration, Department of Health, Education,
and Welfare, 1972-1974

President's Committee for the National Medical of Science, 1977-1980

U.S.-Israel Bi-National Foundation Board of Governors, 1987-

1988-1989

Chairman, International Biotechnology Subcommittee, Comm on Life Sciences, OSTP,

Chairman, Biotechnology Sciences Coordinating Committee, FCCSET, 1988-1989

Director, National Institutes of Health, USPHS, DHHS, 1982-1989

JAMES B. WYNGAARDEN

PREHEARING QUESTIONS OF SENATOR HOLLINGS AND THE ANSWERS

1. If confirmed as an Associate Director of the Office of Science and Technology Policy (OSTP), what will be your principal responsibilities and activities?

ANSWER: If confirmed, I will serve as Associate Director for the Life Sciences under Dr. D. Allan Bromley, the Director of the Office of Science and Technology Policy. The Life Science area includes basic and clinical research in biomedical and behavioral disciplines, agricultural research, research on environmental matters, particularly as they pertain to agriculture and human health, and the field of biotechnology. My most important responsibility will be to provide the President, through Dr. Bromley, with the best available advice on science and technology for policy, and on policy for science and technology. In addition, the President has requested that "OSTP play a central role in developing and coordinating Federal science and technology strategies, and in analyzing cross-cutting issues in research and development." Also OSTP and the Office of Management and Budget (OMB) staff will collaborate at all levels in developing the President's budget request for future years, and will interact at the beginning and throughout the budget cycle.

It is Dr. Bromley's intention to appoint associate directors in four areas, and to involve all associate directors in the range of issues addressed in OSTP in a collegial and flexible manner. Thus, while each of us will have primary areas of responsibility, all four associate directors will also have opportunities to contribute across the spectrum of OSTP activities.

2. What do you see as the Nation's principal Life Sciences and Public Health Issues, and what role do you see OSTP playing in the creation and implementation of Federal policies regarding these issues? If confirmed, what would be your two or three highest priorities?

ANSWER: As a member of the President's staff, I shall support his agenda of Public Health issues, which prominently include the AIDS epidemic and the drug addiction problem, as well as prevalent chronic diseases for which we have as yet no definitive cures. The last group includes cancer, heart disease, neurological diseases such as multiple sclerosis, and the dementias, including Alzheimer's disease. In all of these areas we need to assure that promising research results are translated into new strategies for prevention and treatment as rapidly as is consistent with public safety.

OSTP will play a major role in coordinating Federal science and technology strategies, and in analyzing cross-cutting issues in research and development. It will also work with the OMB in establishing priorities for Federal funding, and in identifying emerging scientific opportunities.

If confirmed, my highest priorities would include AIDS--more accurate modeling of the spread of HIV infection in the population; adequate research on the structure and biological properties of the AIDS virus (HIV); emphasis on more vigorous studies of cofactors, for example, helper viruses that may determine latency or virulence of the infection; development of anti-viral drugs and vaccines; and continued emphasis on education and other prevention strategies.

A second high-priority area is addiction, and new biomedical and behavioral approaches to new strategies for this problem, including emphasis on development of pharmacological agents that may interdict the actions of addicting drugs, or block the craving for them.

I shall also continue to place high priority on policies to promote the welfare of biotechnology in this country, including continued efforts to harmonize the regulatory approaches of the several agencies with cognizant responsibilities, and to continue to facilitate technology transfer through arrangements that promote cooperation between scientists in national laboratories and universities on the one hand and those in industry on the other.

Further, I believe OSTP should explore whether the Federal government should play a larger role in funding of generic applied research and training, for example to facilitate scale-up of laboratory discoveries when they move into industrial development. This is an area in which we have fallen far behind our major foreign competitors.

Finally, even in times of fiscal constraint I believe it is important to invest in high priority research of vital importance to the future. One such innovative undertaking likely to have far-reaching impact on human health and on the biotechnology industry is the human genome mapping and sequencing project in which the National Institutes of Health and the Department of Energy are primarily taking the lead. I have every confidence that with new information will come new applications and that this is one area in which the United States can continue to set the pace for the world.

3. If Congress provides a Fiscal Year (FY) 1990 appropriation for OSTP at the requested level, what size staff do you anticipate having, and how will they be organized? For example, how many Assistant Directors and professional staff would report to you, and what would be their principal functions?

ANSWER: A Fiscal Year 1990 appropriation for OSTP at the level recommended by the Senate of just under \$3 million would fund a staff of 33 individuals. A number will be needed to support Dr. Bromley and the central OSTP office. Each of the four major divisions of OSTP, each headed by an Associate Director, will likely comprise from five to seven individuals. In the Division of Life Sciences, we envision one and possibly two Assistant Directors in such areas as biotechnology, agriculture, and the environment. We will need two and possibly three policy and program analysts and an office support staff. I expect to pay particular personal attention to matters of biomedical and clinical science and biotechnology, but will also participate with Dr. Bromley and the other associate directors in all major matters coming before OSTP.

4. What relationship to you expect to have with the Office of Management and Budget (OMB)? For example, do you expect to play a formal role in the review of proposed agency budgets and in decisions regarding the budgets for research projects that cut across agency lines?

ANSWER: I anticipate that all divisions of OSTP, including the Life Sciences Division, will work closely with the Office of Management and Budget at all levels. In developing the Presidential budget request for future years, the President has requested that "OSTP play a central role in developing and coordinating Federal science and technology strategies, and in analyzing cross-cutting issues in research and development. The Assistant to the President for Science and Technology would also assist the Office of Management and Budget in developing plans for multi-year authorizations, and appropriations for research and development programs. . . ." We envision that OSTP will work closely with OMB at the beginning and throughout the budget cycle.

The Life Sciences Division will evaluate agency-wide programs, and assist Dr. Bromley in carrying out his responsibilities in the Life Sciences area.

5. During the Reagan Administration, the OSTP Director created a Biotechnology Science Coordinating Committee (BSCC). Do Dr. Bromley and you intend to continue this Committee and, if so, what responsibilities will you give it and what policies or actions do you expect to result from its activities?

ANSWER: Yes, we intend to continue and indeed strengthen the Biotechnology Science Coordinating Committee (BSCC). It bears emphasis that the BSCC is a coordinating and review committee on the basis of whose evaluations and advice policy makers in government can take decisions. The BSCC is not itself a policy making body.

As you know, I chaired the BSCC for the last two years. Dr. Bromley has now appointed Dr. John Moore, Deputy Director of the National Science Foundation, to serve in this capacity. He and I have already had several discussions of the next phase in development of the BSCC.

The BSCC is responsible for coordinating Federal policies with respect to biotechnology and the science that supports it. It serves as a forum for the review of proposed procedures affecting biotechnology, principally those of the Food and Drug Administration, the Department of Agriculture, and the Environmental Protection Agency, from the standpoint of their scientific basis, and for considering their impact upon research and development, and upon the competitive position of the American biotechnology industry.

At the request of the Department of State, the BSCC reviews proposed policies, guidelines, and regulations emanating from the Office of Economic Cooperation and Development in Paris and the European Community in Brussels, and advises State as to their scientific justification, impact and acceptability. I anticipate that this function may be expanded in the future with respect to Japan and other Pacific rim countries.

Dr. Bromley and I intend to involve the President's Committee of Advisors for Science and Technology (PCAST), representing the non-governmental sector, in the oversight of the BSCC in a more active manner than has been true in the past. In addition, we plan to consult more actively on all these issues with members of the biotechnology industry, with state biotechnology offices, and with academic scientists whose work relates to biotechnology.

Although I believe that the BSCC has made important contributions in the identification of a common knowledge base, and in emphasizing a regulatory approach founded on risk assessment of products rather than of processes by which they are produced, there is still much to be achieved in the harmonization of regulatory approaches among the various regulatory agencies and in the achievement of consistent, coordinated biotechnology management across agency boundaries. The recent report of The National Research Council/National Academy of Sciences entitled, Field Testing Genetically Modified Organisms--Framework for Decisions, which the BSCC commissioned while I was Chairman, is a step in this direction.

6. The Human Genome Project includes multiple Federal agencies and difficult policy issues involving international cooperation, intellectual property, and medical ethics. This leads to several questions:

- Do you see yourself and OSTP playing a major role in formulating and implementing the Federal human genome research project? What should be the role of OSTP, and what should be the role of such agencies as the Department of Health and Human Services and the Department of Energy?
- Do you believe that the United States should actively pursue international cooperation in this project, or should the U.S. reserve some or all of its research results in order to assist the American biotechnology industry?
- What steps can and will be taken to ensure that the policy issues associated with the human genome project are addressed early on and thoroughly?

ANSWER: A. I believe there is a clear role for OSTP in helping to develop Administration policy for the human genome project and in implementing the final policy decisions of the Administration. The OSTP will be the agency advising the President on the relative priority to be given to various areas of science and technology in developing the President's budget. I would, therefore, expect OSTP to have a significant role in recommending appropriate levels of funding to be devoted to genome research, taking into account the scientific opportunities and the state of international cooperation.

The role of the NIH and the DOE will be to direct and support the project. A very close working relationship has developed between the agencies and they will soon produce a joint plan for the project that spells out the goals for the next five years and the administrative measures necessary to achieving these goals. Both agencies have recruited excellent scientific advisors to help them manage this project and develop the joint plan. These advisors are in the best position to determine the details of how the project should be conducted.

The strengths and interests that NIH and DOE bring to the genome project are highly complementary. NIH brings a wealth of biological and medical expertise and DOE has extensive experience in technology development and computer science. DOE is focussing the major part of its program in its National Laboratories, where large groups of scientists from diverse disciplines are working on this project, while NIH awards most of its funds in support of projects at universities, research institutes, and industrial sites across the country. The complementary approaches of the two agencies give substantial additional strength to the U.S. program.

B. The human genome project is essentially a basic research project that involves analyzing the chemical structure of human DNA. Such basic research does not flourish in secrecy. We have much to gain by international collaboration in this endeavor; undoubtedly some of the information we want will be generated abroad. Because this information is expected to be the ultimate source book for understanding human biology, everyone concerned believes strongly that it must be freely available to all people. Mankind shares a common interest in this project.

Although the basic data must be freely available, the applications developed using these data, as well as the technology used to generate them, should be protected in the customary fashion by patenting and related measures. This is an area where the American biotechnology industry should be heavily involved. We need to assure that industry is in a strong competitive position to take advantage of the opportunities generated. Both NIH and DOE are taking steps to insure that the private sector is involved in the project at all levels, from participation on advisory committees to receiving grants and contracts to conduct appropriate parts of the project. The current ties between the biotechnology industry and academia in these areas are very close, with investigators moving freely between the two arenas.

A problem may arise for the international genome effort in the area of patent law. As you know, the U.S. patent law differs from that in most other countries, causing present and potential difficulties for the U.S. biotechnology industry. This is an area that requires additional discussion and resolution.

C. The human genome project is an excellent example of a project in which a number of science policy issues received extensive discussion before the project started. Several eminent committees examined these issues and prepared scholarly reports that have been highly influential. Among these were the committees established by the National Research Council and by the Office of Technology Assessment.

One of the policy issues that was not resolved is whether or not there should be a lead agency. In this regard I believe that DOE and NIH have demonstrated that they can work together very effectively without a lead agency being designated. As long as things go so well, I see no reason to make any changes.

As genome projects arise and grow in other countries, issues concerning effective international coordination may arise. So far things are going well in this regard. All parties subscribe to the principal of collaboration. Indeed there is an amazing consensus among world scientists involved that international cooperation is essential. Such cooperation already exists with respect to DNA sequence data, between GenBank (located at Los Alamos) which enters data published in the U.S., the European Molecular Biology Laboratory (located at Heidelberg, West Germany) which enters data published in Europe, and the DNA-Data

Bank of Japan. Oversight and coordination of these efforts will be the joint responsibilities of the associate directors for Life Science and for Policy and International Affairs and Social Sciences in OSTP.

The policy issues regarding safeguards to prevent misuse of the genetic information resulting from the project are less clear. I am very pleased that both the NIH and the DOE are devoting some of their funds to studies of ethical, legal, and social issues that arise from the application of genomic information. They plan to identify and define the areas of concern and develop options for addressing them. I am confident that we can put in place safeguards that will enable the human community to reap handsome benefits from the project while avoiding postulated problems.

7. I have three questions regarding AIDS:

- Are you satisfied with the current Federal research effort to understand the AIDS virus, search for effective treatments and a cure, and to transfer new research findings quickly to the affected population? If not, what additional steps do you believe need to be taken?
- How concerned are you about the apparent increase in the number of American teenagers who have AIDS? Do you believe that current Federal efforts in AIDS education are adequate?
- Will the Bush Administration issue a comprehensive policy regarding AIDS research, treatment, and education? If so, what role will OSTP play in its formulation?

ANSWER: A. While no one should be satisfied with a situation in which large numbers of our citizens become infected with HIV each year, I do feel that the Federal research effort has been increasingly vigorous since 1983 and appropriate to the level of scientific opportunity perceived during the planning phase of each budget cycle. From a budget of \$5.5 million in FY 1983, the amount invested in AIDS within the Public Health Service (PHS) has grown to approximately \$1.3 billion for FY 1989. The President's AIDS request for FY 1990 is \$1.6 billion. Yet, in spite of the continually expanding scope of federally sponsored research in the area of AIDS, the problem has proved to be one of the most intractable faced by modern medicine.

Federally sponsored research continues to expand rapidly in several different directions, including epidemiology, clinical manifestations and pathogenesis, therapeutics, vaccine development, and neuroscience. However, a considerable percentage of the large PHS budget for AIDS has been expended in response to public pressures for maximal expansion of clinical

trial programs for inclusion of very large numbers of HIV-positive individuals in these trials, many more individuals than would be included for scientific study reasons alone. During several years, the research budgets of PHS agencies were tapped in order to provide funds for free distribution of azidothymidine (AZT) to HIV-positive individuals, thus reducing the research effort. In addition, new scientific opportunities are frequently identified long after the planning phase of a budget cycle has passed and, absent discretionary funds, these have had to be deferred to a later fiscal year. Finally the severe FTE constraints on the Department have seriously handicapped implementation and management of AIDS research programs, particularly clinical trials, and have resulted in substantial transfer of individuals from non-AIDS research areas also having high priorities into AIDS work.

Nevertheless, the large Federal investment in AIDS research is paying off in terms of increased understanding of the human immunodeficiency virus and in the development of therapies and interventions. Basic research on HIV has provided information on the viral life cycle. It has disclosed multiple points of potential vulnerability of the virus to chemical intervention. We need even more information on the structural biology of the virus in order to design tailor-made drugs that will attack the virus at several stages in its life cycle. Many experts believe that we will eventually come to multi-drug regimens for treatment of HIV infection, just as we have for many cancers.

Although the public is understandably impatient with the rate of progress made in developing therapeutic agents, the rate of discovery has actually been extraordinary when considered against the background of rates of progress against many other diseases. To have a drug such as AZT available for use by the public in only a few years after the discovery of the disease is itself remarkable. There now are other drugs in clinical trial that appear to have merit. Simultaneously the Food and Drug Administration and the National Institutes of Health have introduced proposals for expanded access or "parallel track" release of experimental agents while still under trial and review, that will help to bring latest treatments to affected populations at earlier and earlier stages.

In addition to the continued emphasis upon the traditional approaches, including those of drug and vaccine development, I believe we need to devote even more resources to fundamental studies of the virus and of the immune system, since clearly we need additional insights and new strategies for dealing with this extraordinarily serious situation. And finally we need much stronger educational and preventive measures. For these we are handicapped in not having critical information about sexual practices of much of our population, nor effective educational and interventional measures for reaching some of our most vulnerable citizens.

B. I am very concerned. Although AIDS among teenagers comprises a small proportion of the total number of AIDS cases, it is already the seventh leading cause of death in young adults 15 to 24 years of age. In addition, given the incubation period of 10 years or more between time of infection with HIV and AIDS, the much greater incidence of AIDS in 20-29 year olds (approximately 20% of total cases) is most likely due to infection contracted during the teen years. The high incidence of other sexually transmitted diseases among teenagers, approximately 2.5 million cases per year, suggests that this age group will be at increased risk of HIV infection as the epidemic continues. We must be more effective in impressing upon our youth that sexual behavior carries with it unprecedented risks, as well as responsibilities.

C. In June 1988 the Public Health Service convened a several days meeting in Charlottesville, Virginia, attended by 85 experts from the Public Health Service, whose primary purpose was the development of an expanded, integrated, and comprehensive national Public Health Service approach to address the HIV epidemic for the next several years. This meeting gave rise to an extensive article in Public Health Reports, Vol. 103, published in November 1988. This document continues to serve as a basis for policy development within the Public Health Service.

For several years there has been a Public Health Service Executive Task Force on AIDS which meets biweekly in the office of the Assistant Secretary for Health. All Public Health Service agencies are represented on this Task Force. It provides an excellent arena for information exchange and cooperation among agencies. Periodic scientific reports ensure that all members are kept current on developments in AIDS, including basic scientific studies, drug development, vaccine development, modeling studies of transmission of HIV infection, changing pattern of clinical manifestations, changing patterns of infection among the various segments and age groups of the society, involvement of children, and roles of various sexual practices and drug addiction practices in the epidemic. Last year OSTP sponsored a conference examining several of the approaches to modeling the spread of HIV infection that brought together national experts in this field.

Comprehensive examination of the AIDS epidemic has taken place through committees of the National Academy of Sciences/Institute of Medicine, the President's AIDS Commission, chaired by Admiral Watkins, and annual international AIDS Meetings which rotate among great cities of the world.

The role of OSTP, particularly the Life Sciences Division, will be to assure coordination of Federal efforts regarding AIDS research and treatment and education programs, and to participate in identification of high priority activities and initiatives, and to work with OMB throughout the budget cycle in planning appropriate levels of Federal funding of the AIDS program.

8. Do you agree with those medical analysts who believe that other viruses could cause worldwide epidemic as serious or more serious than the AIDS crisis in the years ahead? Should Federal biomedical research devote greater attention and resources to that threat?

ANSWER: While AIDS is the most recent newly emerged epidemic virus, it is not the only new virus that has emerged during this century. The 1918-19 global pandemic of influenza can only be described as cataclysmic, even when compared to the current AIDS epidemic. During the month of October, 1918 over 180,000 people died in the United States alone. The worldwide death toll has been estimated to be in excess of 20 million. The source of that epidemic virus is still a mystery, but it is clear that there is no reason that an influenza virus of similar virulence or pathogenicity could not emerge in the future. There are other examples such as the emergence of Rift Valley Fever in Egypt, dengue and dengue hemorrhagic fever in the Caribbean and Argentine hemorrhagic fever in South America.

The emergence of any new virus is a complex process that is not well understood. Four major factors are often cited in the emergence of these new infections.

- A. New viruses arise through mutation and genetic reassortment. These are dynamic processes. Influenza viruses provide excellent example of this process at work with an "old" virus. As recently as 1957, the Asian flu virus became epidemic and is estimated to have killed 70,000 Americans that year.
- B. The changing relationship of humans with their environment. Humans live in all parts of the globe and come in contact with other species in the environment that may harbor viruses that are new to humans.
- C. The ever increasing population creates demands and changes in our environment that favor the spread of old as well as new infectious diseases. The population of the world is now about 5.0 billion and it has doubled in less than 20 years. One of the products of this exuberant population growth is the emergence of enormous conurbations, which have never been seen before on the Earth. These huge cities, with poor sanitation, poverty and crowding, provide ideal settings for the emergence of infectious diseases.
- D. The jet airplane and other improvements in transportation make it possible for infections to spread rapidly.

I believe it is important to devote greater Federal resources and attention to the potential threat of new infectious diseases. One suggestion is to increase our support for international health research efforts. Others have suggested that had the developed countries supported such research in Africa in the 1960s, AIDS might have been identified ten to fifteen years

earlier, and strategies developed that might have reduced its spread. Most research on tropical, parasitic and "new" infections is done in the developed countries of the world. Most developing countries can not sustain support for the sophisticated research base required to do this research and also maintain adequate support for their own public health programs. Consequently, it is more important now than ever before to maintain support for research on these important infections.

9. Global warming and other human-induced changes in the global environment threaten to have major impacts on the planet's biology. One area that has received increasing attention in Congress is biodiversity, particularly the incredible number of plant and animal species now being destroyed and the implications of that destruction for such activities as agriculture and biotechnology? Do you believe that this loss of biodiversity is or will become a major problem; and, if so, what role do you see OSTP playing in this area?

ANSWER: The continued loss of biodiversity, and continued destruction of plant and animal species, is indeed a potential global tragedy. There are estimates that the tropical rain forests contain greater than 80% of the remaining uncharacterized gene pool of the planet, and any activities that threaten tropical rain forests exacerbate the problem. The most important threats are the indiscriminate cutting of forests and strip-plowing. Other important causes of loss of biodiversity include draught and desertification, effects of acid rain, overly intensive harvesting, fishing and hunting, poor conservation activities in farming, and overpopulation.

The loss of biodiversity has important implications for agriculture and biotechnology. There are many examples of exotic species serving as important models for research. For example, major advances in the understanding of kidney function and in the development of diuretics and other drugs for hypertension, have come from work on the dogfish shark.

OSTP will continue to use its good offices to aid and abet the saving of tropical rain forests. The Director is also committed to achieving a deeper scientific understanding of the basis for global warming and the extent to which this trend is caused by man-induced changes in the global environment. The present models of the contribution of CO₂ and other so-called greenhouse gases are quite inadequate. For example, only recently has the impact of cloud cover been incorporated into models, and much additional work is necessary to understand the phenomenon. Recent evidence supporting the view that the output of the sun is not constant, and that cycles of global warming and cooling reflect cycles of intensity of heat output by the sun introduce an alternative possibility that also needs much additional study.

10. President Bush and Congress have recently joined to increase funding to fight the drug crisis. However, it is clear that the nation's medical and psychological therapies for eliminating or blocking addiction need improvement. For example, at present we have no medical treatment that reduces the urging for crack cocaine among addicts. How much Federal money does the President propose to spend on biomedical research into the nature of drug addiction and on the development of new medical and psychological methods for dealing with this addiction?

ANSWER: President Bush and the Congress have, indeed, raised the fight against addicting drugs to the level of a national priority. If confirmed as Associate Director for Life Sciences, I will assist Dr. Bromley in an evaluation of the Federally sponsored research effort on drug addiction and in advising the President on initiatives that might be taken and on the level of funding to be recommended.

Federal support of biomedical research into the nature of drug addiction and on development of new medical and psychological methods for dealing with drug addiction is centered in the Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA), in particular in its National Institute on Drug Abuse (NIDA). The President's budget proposal for FY 1990 contains \$716,909,000 in the ADAMHA budget for drug abuse treatment and prevention (including the drug component of block grants) and \$229,795,000 on drug abuse research. The latter figure is in the NIDA research budget.

In addition, there is a drug supplemental request in the FY 1990 budget of \$708,840,000 in drug abuse treatment and prevention, and of \$25 million for drug abuse research. Of the basic appropriation request NIDA will spend \$24 million of its research budget on medication development. This represents an expansion of a program established in 1988 under the Anti-Drug Abuse Act, which enabled the Institute to initiate a program for discovery of new chemical entities, testing their safety and efficacy, and working with the pharmaceutical industry to facilitate approval and marketing of promising agents.

NIDA supports a full range of research programs in drug addiction, from basic studies in the neurosciences to clarify mechanisms through which drugs act in the nervous system, to clinical studies of effectiveness of new and innovative approaches in the treatment of drug abuse, and epidemiological studies of the incidence and prevalence of drug abuse in the United States.

11. As you know, this month Congress once again is grappling with the problem of high medical costs. The immediate issue is catastrophic health coverage for older citizens, but the skyrocketing cost of new medical technology and treatment has led to general concerns about the cost and affordability of health care. What role, if any, can OSTP play in advising the President and others regarding new medical technology and its allocation to our citizens?

ANSWER: The problems of high medical costs, of catastrophic health coverage for older citizens, and of a major uninsured segment of our population are, indeed, appropriately prominent issues on the national agenda. New medical technology and new and complex treatments do, indeed, contribute to the high cost of medical care. They also contribute to the increasing accuracy of diagnosis, and the increasingly powerful interventional methods that modern medicine can offer.

But it warrants saying that new technologies and new medical research discoveries also reduce the cost of medical care. Disease prevention is always preferable to disease treatment and almost invariably more economical. The classic example is the development of the poliomyelitis vaccine which rendered obsolete the iron lung, and expensive hospitalization, and relieved most of the citizens of developed countries of the fear of a catastrophic and potential crippling illness. More recent examples include an effective vaccine for hepatitis-B, plus several new vaccines for pertussis now in late stages of clinical testing.

In recent years, as I testified as Director of the National Institutes of Health on the President's budget for the Institutes before the Budget Subcommittees of the House and Senate, I included in my testimony examples of medical advances that had substantially reduced the cost of health care. Each year there was a new list of specific advances to be presented. In the aggregate, annual economies resulting from medical research exceed the NIH budget, by some estimates 5 to 7 fold.

As your question implies there can be overutilization of new medical technology. A well-known example is the use of CAT scan in cases of head injury. There are indeed indications for its appropriate use in such events, but for defensive medical legal reasons the procedure is all too often employed for patients whose head injury has produced no loss of consciousness, no neurological findings, no evidence of fracture, and no inappropriate headache. The yield of abnormal findings in such instances is extraordinarily low, yet not zero. Understandably physicians are reluctant to forego the procedure, but it is this kind of practice that may contribute disproportionately to the costs of medical care.

OSTP, and the Life Sciences Division in particular, stands ready to assist the Economic Policy Council in any way that it can in exploring the appropriate use of medical technology and the issue

of allocation of such technology to our citizens, but it must be said that this is an extraordinarily complex problem, and previous attempts to control the proliferation of expensive technology through such devices as necessity of use certificates have not been successful. In my view, the issue is far less one of science and technology policy than it is of standards of medical practice and of policies of health care financing. The primary responsibility for these matters has traditionally rested elsewhere in the private, state, and Federal government components of our pluralistic society.

12. The Federal Technology Transfer Act of 1986 permits and encourages Federal laboratories to enter into cooperative research and development agreements with companies, state governments, universities, and others in order to speed the transfer of federally-funded research to potential users. In your experience, is the law working well? What successes and what problems, if any, do you see?

ANSWER: My experience with the Federal Technology Transfer Act of 1986 is limited to its implementation at the National Institutes of Health. As Director of NIH I appointed Dr. Philip Chen as Chairman of the Patent Policy Board on April 7, 1987, and since that time general policies have been established, working subcommittees brought into action, and over 100 cooperative research and development agreements (CRADAs) put in place. A new Office of Invention Development now serves as the major operational focus for drafting policy and procedure documents, for educational activities, for developing patent licensing strategies, and for carrying out the myriad functions involved in technology transfer.

Last year and again on April 3, 1989, NIH sponsored an NIH/ADAMHA Industry Collaboration Forum, with extensive discussions on implementation of the Act of 1986. Key documents were made available to participants. A "Collaboration Directory," contained these documents, lists of individual contacts, of CRADAs, and of government patents available for licensing. The "Policy Statements on CRADAs and Intellectual Property Licensing" expressed NIH's basic philosophy and confirmed its commitment to transfer technology within a framework that promotes free exchange of ideas and information. Issues such as fair access to NIH collaboration by any interested company, the possibility of exclusive licenses, and the pricing issues were addressed. Another key document is "A Model CRADA Agreement," which has greatly expedited review and approval of proposed CRADAs. NIH is also dealing aggressively with the issue of conflict of interest in industry collaborations. As we have gained experience with intramural NIH scientists serving as consultants to industry, and more recently as participants in CRADAs, some unanticipated potential conflicts of interests have arisen.

NIH has identified some impediments to technology transfer. First, there is at present an inability to protect and license

computer software in a manner analagous to that permitted for patented inventions. Second, the internal offices still need considerable upgrading. NIH must seek highly trained and experienced professionals from outside of government. Recruiting has been hampered by scarcity of talent, and by government salaries that are low relative to the private sector.

On October 5, 1989, Dr. Philip Chen testified concerning NIH experience with the Federal Technology Transfer Act of 1986 before Congressman Ron Wyden's Subcommittee on Regulation, Business Opportunities and Energy of the Committee on Small Business. His testimony is available should you wish a copy of it.

13. In your judgment, how large is the problem of scientific misconduct, fraud, and error in the biomedical research community? What responsibilities do professional journals, Federal agencies, and medical societies have to ensure that false or fraudulent research findings are not disseminated and do not lead to dangerous or ineffective treatments?

ANSWER: The topic of misconduct in science has attracted considerable attention in the last seven or eight years, mainly because of a handful of well-publicized cases. In my judgment the incidence of serious scientific misconduct is small, relative to the number of scientists engaged in biomedical research. For example, the National Institutes of Health supports 52,000 scientists, engaged in 28,000 projects in 1650 institutions. In the past five years, NIH has received an average of about 20 allegations of scientific misconduct each year. About half of these prove to have no validity and represent misunderstandings, valid scientific disagreements, or occasionally personal vendettas. About one-half of the remainder have some validity, but are minor events, for example, failure to obtain appropriate advance approval for certain kinds of experiments, or other technical infractions. The remaining four or five cases represent misconduct of various degrees of seriousness. Some are egregious, perhaps even criminal. These cannot be tolerated. Penalties such as debarment from eligibility for Federal grant support for periods of three to ten years and, in at least one case, criminal conviction and a jail sentence have resulted.

The number of cases of alleged misconduct reported to the NIH is almost surely an underestimate of the extent of the problem, but I do not subscribe to the view that dishonesty is frequent. The explosion of progress in biomedical sciences and the regular confirmation of important work, attest in my view to the honesty and dedication of the vast majority of biomedical researchers. It also bears emphasis that scientific disagreement is at the heart of progress in research. It is extremely important to distinguish disagreement and honest error, which are byproducts of the complex human process of discovery, from scientific misconduct or dishonesty in reporting results.

Professional journals and societies share with Federal agencies the responsibility to ensure that fraudulent research findings are not disseminated and that a significant error in the scientific literature, from whatever cause, is promptly corrected. Numerous professional associations and societies have developed standards of conduct for scientists and authors. Journal editors have joined energetically in discussions of these issues but point out that the peer review of manuscripts, to judge suitability for publication, is not a very effective way of detecting dishonest work.

All cases of scientific misconduct known to me have been discovered by other scientists, who in the course of work intended to build on other discoveries, have detected inconsistencies or unreproducible results. Although the concept of science as a self-correcting enterprise has been challenged in the press repeatedly, I am deeply committed to the concept and know of no better approach for detection of dishonesty. The grantee institutions and Federal granting agencies are, however, still evolving the most appropriate procedures for dealing vigorously yet fairly with allegations of misconduct. During my last year as Director of the National Institutes of Health, I established an Office of Scientific Integrity in the Office of the Director with primary responsibility for monitoring the investigations of institutions, and for conducting its own inquiries when indicated.

14. In recent years, concerns have been raised about possible conflicts of interest among university researchers who are also involved one way or another with private biomedical companies. In one case, a researcher at Harvard tested an eye medication while owning stock in the company trying to develop and market the product. Are you concerned about these cases? Is this a large or potentially large problem? What regulations may be necessary to prevent such conflicts of interest? Is there the danger of over-regulation?

ANSWER: I am concerned whenever the integrity and objectivity of biomedical research appear to be compromised in any way. The situation you describe raises questions about the investigator's objectivity. Indeed, that case is one of several that prompted me as Director of the National Institutes of Health (NIH) to issue new guidelines concerning potential conflicts of interest. In January 1989, NIH stated its expectation that investigators and consultants not have financial interests in organizations or entities that produce drugs, devices, or other interventions studied in an NIH-financed controlled clinical trial.

Further, in June 1989, NIH sponsored a two-day forum on issues related to conflicts of interest and commitment that may arise when there is joint sponsorship of research from federal, industrial, or other private sources. Participants included basic and clinical scientists, academic investigators, industrial and legal representatives. At the forum the research community

expressed strong views that primary responsibility for dealing with conflicts of interest should lie with the grantee institutions, but that awarding agencies should formulate clear guidelines to help institutions develop specific rules.

As a follow up, on September 15, 1989, the NIH and the Alcohol, Drug Abuse, and Mental Health Administration published for comment new guidelines for awardee institutions to consider in developing their own policies. The guidelines rest heavily on the principle of full advance disclosure of any existing relationships between participating scientists and companies with any interests in the clinical trial being proposed.

Although the concern over conflicts of interest is serious the problem does not appear to be so large as to be unmanageable or unresolvable. At the present time, NIH does not think that new regulations are required. NIH is awaiting responses to the proposed guidelines, and these do doubt will be valuable in crafting a final policy statement.

As your question implies, there have been expressions of concern that over-regulation may stifle innovation and thus threaten United States leadership in biomedical research and its applications. That result is surely to be avoided, and I think it can be. Nevertheless, clearly stated ethical principles and standards of conduct will ensure the public's continued confidence in the research enterprise and its results, particularly in the area of product testing.

STATEMENT OF DR. JAMES B. WYNGAARDEN

Dr. WYNGAARDEN. Yes, thank you very much for those comments, Senator Rockefeller.

You have clearly hit upon one of the very complex problems facing the American public and one in which I think our office can play some role. My own background as a former Chairman of a Department of Medicine, and more recently Director of the NIH, has put me in contact with many of those issues, but somewhat more on the biomedical research side than on the outcome research side. That is a major activity of another branch of the Public Health Service, although the National Institutes of Health participated in many instances.

Many of those studies that were conducted by the NIH provided some insights into the appropriate role of certain procedures. In such procedures as tonsillectomy, for example, or adjuvant therapy in breast cancer, outcome studies were really quite decisive in contributing to new viewpoints on their appropriate roles.

Some of those have very clearly resulted in substantial savings. The tonsillectomy study, for example, reduced substantially the prevalence of inappropriate and unnecessary tonsillectomies, and substantial dollar savings have resulted.

Nevertheless, outcome research is a large area, and it is one in which the Office of Science and Technology Policy, and the Life Sciences Division in particular, can be useful. Many of those issues are also being addressed by the group in the White House of which Dr. Roper is now a major member. We have had some preliminary discussions on ways in which our offices could collaborate and mutually contribute to issues of just that kind.

[The statement follows:]

STATEMENT OF DR. JAMES B. WYNGAARDEN

My name is James B. Wyngaarden. I am appearing before the Committee this morning as President Bush's nominee for the position of Associate Director for Life Sciences, in the Office of Science and Technology Policy (OSTP), Executive Office of the President. I am a physician and biochemist. Most of my professional career was spent as a member of the faculty of Duke University in Durham, North Carolina. For the past seven years I have served as Director of the National Institutes of Health (NIH), U.S. Public Health Service, Department of Health and Human Services.

I am deeply honored that Terry Sanford, the senior Senator from North Carolina, agreed to introduce me today. Senator Sanford was President of Duke University during much of the time that I served as Chairman of the Department of Medicine at Duke Medical School. He is a man I greatly admire as well as a personal friend. I am indebted to him for appearing before the Committee in support of my nomination.

I believe that my experiences as a biomedical scientist, as a physician, as a chairman of the department of medicine, and as Director of the NIH provide a rich background to my duties as Associate Director of OSTP for life sciences, should I be confirmed. I have also had a number of earlier experiences with OSTP and Presidential Science Advisors. In the early 1970s, I served as a member of the President's Science Advisory Committee (PSAC) under President Nixon. As Director of NIH, I had frequent informal contacts with OSTP and, in addition, I served as a member of the Biotechnology Science Coordinating Committee since its inception, and as its chairman for the past year and a half.

In his opening statement at the time of his confirmation hearing before this committee on July 21, 1989, Dr. D. Allan Bromley emphasized the dual general roles of OSTP, and of his own office as Director of OSTP and Special Assistant to the President. They are to provide to the President scientific and technical advice to inform public policy decision, and to advise on policy decisions for science and technology. If confirmed as an Associate Director of OSTP it will be my chief responsibility, under Dr. Bromley's leadership, to assure that these objectives are met for the Life Sciences.

In addition, it is Dr. Bromley's intention that there be no rigid bureaucratic barriers between the four Associate Directors and the four divisions. Rather he intends to lead OSTP with a high degree of collegiality, and to involve all Associate Directors in all major issues addressed by OSTP. I find this style of operation very appealing, and important to the success of the office.

Others have termed this the life sciences century. Science has for many decades been a powerful contributing force in shaping modern civilization and determining the standard of living throughout the world. Virtually every country is affected by scientific advances in terms of economic opportunity, national security, agriculture, housing, transportation, communications, health, and safety. Increasingly, biomedical sciences are expanding the horizons of health care and providing powerful new preventive strategies, and diagnostic and therapeutic measures. Increasingly, industry is translating new scientific discoveries into products of benefit to the people. The young biotechnology industry in particular is seizing upon discoveries in the life sciences to produce not only health related products, but ones of use in agriculture, environmental control, mining, and other fields once thought remote from the life sciences. For all these reasons, this is a very exciting time in the life sciences and I am grateful to President Bush for nominating me to serve as Associate Director for Life Sciences in OSTP at this particular moment.

I look forward to providing the committee with additional information on any issues that it may choose to explore.

Senator ROCKEFELLER. So you would see yourself working aggressively with others in that area?

Dr. WYNGAARDEN. Yes.

Senator ROCKEFELLER. Would you agree that it will not be until we understand that problem that we can effectively draw up the practice guidelines which will shape to some degree the future of cost?

Dr. WYNGAARDEN. I think outcome studies are an important element of such an effort. I think it is on-going. I do not know that we will have a complete understanding of those factors, perhaps ever, because new procedures are introduced that will continually require evaluation. I think that is one of the activities that needs additional emphasis in our health care system as a basis for planning.

Senator ROCKEFELLER. Dr. Wyngaarden, thank you.

Dr. Ratchford, my question for you, sir, would be: we signed a science and technology agreement with the Japanese last year. It was very important, because the Japanese intended to disregard previous commitments on the exchange of researchers and that was, in my judgment, partly their sort of habit. But on the other hand American researchers have not leapt at the opportunity to get into the Japanese language or to get into—to be able to get into Japanese research situations.

Those that have, give you mixed reviews. Some say that their experience has been very good, and others indicate that, particularly if they are younger researchers, that in the Japanese way of doing things they do not get included. That they may be in the labs but they are not in on the discussions which are making conclusions about what is going on in the labs.

I think it is really an important agreement. It is not very well understood. One does not read about it very much, but it has, I think, large implications for our future bilateral relations with Japan as well as for knowledge around the world.

What do you see your role in terms of looking after the implementation of that U.S.-Japan science and technology agreement?

[The biographical sketch and questions and answers follow:]

COMMITTEE ON COMMERCE, SCIENCE,
AND TRANSPORTATION

WASHINGTON, DC 20510-0123

(If more space is needed, please use attached REMARKS sheet)

1. Name: RATCHFORD JOSEPH THOMAS
(Last) (First) (Other)

Address: 8804 FIRCREST PLACE AMERICAN ASSOCIATION FOR
(Current residence) THE ADVANCEMENT OF SCIENCE
ALEXANDRIA, VIRGINIA 22308 1333 H STREET, NORTHWEST
(Business) WASHINGTON, D. C. 20005

2. Position to which nominated: ASSOCIATE DIRECTOR Date of nomination: OCTOBER 3, 1989

3. Date of birth: SEPTEMBER 30, 1935 Place of birth: KINGSTREE, SOUTH CAROLINA
(month) (day) (year)

4. Marital status: MARRIED Full name of Spouse: JOANNE WALTON CAUSEY RATCHFORD

5. Names and ages of children: JOSEPH THOMAS RATCHFORD, JR. (27) DAVID ANDREW RATCHFORD (19)
LAURA LEIGH RATCHFORD (25)
JAMES RAYMOND RATCHFORD (21)

6. Education:

Institution	Dates attended	Degrees received	Dates of degrees
<u>BELMONT HIGH SCHOOL</u>			
<u>BELMONT, NORTH CAROLINA</u>	<u>1949-1953</u>	<u>DIPLOMA</u>	<u>1953</u>
<u>DAVIDSON COLLEGE</u>	<u>1953-1957</u>	<u>BS (PHYSICS & MATH)</u>	<u>1957</u>
<u>UNIVERSITY OF VIRGINIA</u>	<u>1957-1959</u>	<u>MA (PHYSICS)</u>	<u>1959</u>
<u>UNIVERSITY OF VIRGINIA</u>	<u>1959-1961</u>	<u>PHD (PHYSICS)</u>	<u>1961</u>

7. Employment record: List all positions held since college, including the title or description of job, name of employer, location of work, and dates of consecutive employment.

<u>FROM</u>	<u>TO</u>	<u>NAME OF EMPLOYER</u>	<u>ADDRESS</u>	<u>TYPE OF WORK</u>
5/89	PRESENT	OFFICE OF SCIENCE AND TECHNOLOGY POLICY	OEOS WASHINGTON, D.C. 20506	CONSULTANT
2/77	PRESENT	AMERICAN ASSN. FOR THE ADVANCEMENT OF SCIENCE	1333 H ST., NW WASHINGTON, D.C. 20005	ASSOCIATE EXECUTIVE OFFICER
4/80	7/81	OFFICE OF TECHNOLOGY ASSESSMENT	600 PENN. AVENUE, SE WASHINGTON, D.C. 20510	CONSULTANT
6/76	8/76	INT. INSTITUTE FOR APPLIED SYSTEMS ANALYSIS	A-2361 LAXENBURG AUSTRIA	RESEARCH SCHOLAR
1/70	2/77	COMM. ON SCIENCE, SPACE & TECHNOLOGY	2321 RAYBURN HOB WASHINGTON, D.C. 20515	PROFESSIONAL STAFF
6/64	1/70	AIR FORCE OFFICE OF SCIENTIFIC RESEARCH	BLDG. 410, BOLLING AFB, WASHINGTON, D.C. 20332	PHYSICIST
9/61	6/64	DEPT OF PHYSICS WASHINGTON & LEE UNIVERSITY	FLETCHER AVENUE LEXINGTON, VA 24450	ASSISTANT PROFESSOR
5/63	6/64	NAVAL SURFACE WEAPONS CENTER	10901 NEW HAMPSHIRE AVENUE, SILVER SPRING, MARYLAND 20903	PHYSICIST
9/58	9/61	DEPT OF PHYSICS UNIVERSITY OF VA	P.O. BOX 9017 CHARLOTTESVILLE, VA 22901	GRADUATE ASSISTANT/ INSTRUCTOR
6/59	9/59	SANDIA NATIONAL LABORATORY	1515 EUBANK BLVD, SE ALBUQUERQUE, NM 87201	RESEARCH SCIENTIST
6/58	9/58	NAVAL SURFACE WEAPONS CENTER	10901 NEW HAMPSHIRE AVENUE, SILVER SPRING, MARYLAND 20903	PHYSICIST
6/57	9/57	UNION CARBIDE	4501 ROYAL AVENUE NIAGARA FALLS, NY 14302	RESEARCH ASSISTANT

8. Government experience

List any experience in or direct association with Federal, State, or local governments including any advisory, consultative, honorary or other part-time service or positions.

1978	PRESENT	NATIONAL SCIENCE FOUNDATION	PARTICIPATED IN PEER REVIEW OF RESEARCH PROPOSALS
1989	PRESENT	OFFICE OF SCIENCE AND TECHNOLOGY POLICY EXECUTIVE OFFICE OF THE PRESIDENT	CONSULTANT ON POLICY AND INTERNATIONAL MATTERS
1984	1987	ADVISORY COMMITTEE ON INTERNATIONAL PROGRAMS NATIONAL SCIENCE FOUNDATION	SERVED AS MEMBER AND CHAIRMAN OF NSF EXTERNAL ADVISORY COMMITTEE ON INTERNATIONAL MATTERS
1986		NATIONAL SCIENCE FOUNDATION	MEMBER OF PANELS CARRYING OUT TRIENNIAL REVIEWS OF SCIENCE RESOURCES STUDIES PROGRAM AND INTERNATIONAL PROGRAMS
1979	1980	OFFICE OF TECHNOLOGY ASSESSMENT	CHAIRMAN ADVISORY PANELS ON ENERGY FROM BIOLOGICAL PROCESSES AND ON DOE'S CONSERVATION AND SOLAR ENERGY PROGRAMS
1977	1988	VARIOUS FEDERAL AGENCIES, INCLUDING DEPARTMENT OF ENERGY, DEPARTMENT OF COMMERCE, NASA, NSF, AND DEPARTMENT OF STATE	SERVED ON ADVISORY PANELS (E.G. DOE - INEXHAUSTIBLE ENERGY SOURCES, DOE - HYDROGEN) OR FACULTY FOR TRAINING COURSES (E.G. STATE DEPARTMENT FOREIGN SERVICE INSTITUTE)
1970	1977	COMMITTEE ON SCIENCE AND TECHNOLOGY U.S. HOUSE OF REPRESENTATIVES	PROFESSIONAL STAFF MEMBER; STAFFED NSF AND ERDA AUTHORIZING LEGISLATION AND OTHER SCIENCE, ENGINEERING, ENERGY AND POLICY BILLS
1964	1970	U.S. AIR FORCE OFFICE OF SCIENTIFIC RESEARCH	SERVED AS RESEARCH PROJECT AND GRANT MANAGER IN THE SOLID STATE SCIENCES

DR. J. THOMAS RATCHFORD

A. BIOGRAPHICAL DATA

B. GOVERNMENT EXPERIENCE (CONTINUED):

1968	1969	CONGRESSIONAL FELLOW AMERICAN POLITICAL SCIENCE ASSN.	SERVED AS FELLOW IN OFFICES OF GORDON ALLOTT (SENATE) AND EMILIO DADDARIO (HOUSE)
1958	1964	U.S. NAVAL SURFACE WEAPONS LABORATORY	CARRIED OUT RESEARCH IN SOLID STATE PHYSICS

C. POLITICAL AFFILIATIONS ACTIVITIES:

REGISTERED VOTER SINCE 1964 IN FAIRFAX COUNTY, VIRGINIA (ROLLS DO NOT PERMIT
PARTY SPECIFICATION)

CONTRIBUTIONS WERE MADE TO THE FOLLOWING ELECTION CANDIDACIES DURING THE PERIOD
1979-1989:

U.S. SENATE 1/

JACK SCHMITT \$25.00

U.S. HOUSE OF REPRESENTATIVES 1/

GEORGE E. BROWN, JR.	\$335.00
BILL COBEY	25.00
DON FUQUA	75.00
BUDDY MAC KAY	155.00
JIM MARTIN (FOR BOTH HOUSE AND NC GUBERNATORIAL RACES)	325.00
MIKE McCORMACK	125.00
DON RITTER	45.00
CLAUDINE SCHNEIDER	55.00

FAIRFAX COUNTY SUPERVISOR 1/

CAROL CORYELL \$ 20.00

1/ CONTRIBUTIONS MADE JOINTLY WITH SPOUSE.

DR. J. THOMAS RATCHFORD

PREHEARING QUESTIONS OF SENATOR HOLLINGS AND THE ANSWERS

QUESTION: If confirmed as an Associate Director of the Office of Science and Technology Policy (OSTP), what will be your principal responsibilities and activities? In addition, what responsibilities will you share with other associate directors in such areas as space policy and defense?

ANSWER: In his confirmation hearings on July 21 of this year, Dr. Bromley stated his intention to ask the President to appoint associate directors in four areas. Should I be confirmed, one of these areas, policy and international affairs, would be my responsibility. International affairs at OSTP encompass relations with other countries in the scientific and engineering spheres and the integration of science and technology into U.S. foreign policy initiatives. It includes consideration of the impacts of foreign science and technology on a variety of extremely important issues such as economic competitiveness, national security and science education. Policy affairs encompass topics such as mathematics and science education, and the social sciences.

Dr. Bromley has also indicated that he expects the relationships the associate directors have with each other and to him to be collegial, not rigidly bureaucratic, and that issues and staff will be shared in a flexible manner. This means that precise definitions of responsibilities and projections of specific activities are difficult to make, especially at this early stage before any operating experience has been gained. Space policy and national security clearly will be shared areas within OSTP, and OSTP will work closely with the National Space Council on the former and with the National Security Council on the latter.

QUESTION: What do you see as the principal issues confronting the nation in the policy areas you will cover, and what role do you see OSTP playing in the creation and implementation of Federal policies regarding these issues? If confirmed, what would be your two or three highest priorities?

ANSWER: Should I be confirmed, my highest priority will be to see that the President gets the very best information, analysis and advice in those areas for which I am responsible. This shared objective with the director and the other associate directors clearly will guide the allocation of my own time and those staff members with whom I shall work most closely.

There are a number of extraordinarily important issues facing the nation in the areas encompassed by policy and international affairs. One of the major concerns in the international sphere is better integration of science and technology into our foreign policy. This involves a variety of approaches, including better acquisition, evaluation and dissemination to institutions and individuals in this country of information about excellent research and development being performed overseas.

Also in the international sphere is the issue of planning and support for research "megaprojects" in fields such as high energy physics, controlled thermonuclear fusion, the human genome mapping project, and space research. These increasingly are of global interest and magnitude, in both their scientific and budgetary dimensions. Escalating costs for the projects, limited budgetary resources in most nations, and the need to provide adequate support for individual investigators in our universities and other laboratories dictate a fresh look at the international dimensions of these "megaprojects". I view this task as one of the most important in the "policy for science" category that Dr. Bromley referred to in his confirmation hearings.

Improving mathematics and science education is one of the greatest challenges facing the nation and OSTP today. The federal role is crucial in dealing with this challenge, but with the exception of graduate education and research, federal involvement has in the past been small and constantly shifting in its focus. Initial steps by OSTP in dealing with this challenge will include: responding to the Senate Appropriations Committee request in its recent report language to improve coordination between the Department of Education and the National Science Foundation in the area of mathematics and science education; implementing a study by a panel of the President's Council of Advisors on Science and Technology (PCAST) on the federal role in mathematics and science education; and establishment of a new committee of the Federal Coordinating Council for Science, Engineering, and Technology (FCCSET) to address federal agencies' roles with respect to science and mathematics education.

As for the social sciences, a more concentrated effort will be made to integrate expertise from the social sciences with that from engineering and the life and physical sciences as issues are analyzed and recommendations developed at the highest policy levels. On the "policy for science" side of the ledger, issues of funding and federal coordination of research in the social sciences will be near the top of the list.

QUESTION: If Congress provides a fiscal year (FY) 1990

appropriation for OSTP at the requested level, what size staff do you anticipate having, and how will they be organized? For example, how many assistant directors and professional staff would report to you and what would be their principal functions?

ANSWER: Should the fiscal year 1990 appropriation for OSTP be \$2,997,000, -the amended Administration request that was approved by the Senate - resources will be available for 33 full-time equivalent (FTE) positions. This level of funding will provide for the director, a central administration staff, and the four associate directors, who would have each about five or six FTE positions. Firm decisions have not been made concerning the character and allocation of these positions. It is anticipated that such decisions will be made with the participation of all associate directors, and after a thorough review of the impacts various civil service rules and regulations will have on the ability of the director to staff the office appropriately. In the meantime, an interim structure of the office is being developed by Dr. Bromley that will be reviewed and revised as the selection, nomination and confirmation of the associate directors is completed.

Despite the large increase in the OSTP budget for fiscal year 1990 (as compared to fiscal year 1989) that was requested by the President and approved by the Senate (and hopefully the Committee of the Conference) the staff resources for the office are still on the margin of adequacy. Plans for a staff of 45 in fiscal year 1991 were discussed with this committee by Dr. Bromley during his confirmation hearings in July. The fiscal year 1991 level of staffing should be adequate at the project level of 45, provided arrangements can be made to obtain certain research and analytic support services.

QUESTION: What relationship do you expect to have with the Office of Management and Budget (OMB)? For example, do you expect to play a formal role in the review of proposed agency budgets and in decisions regarding the budgets for research projects that cut across agency lines?

ANSWER: Dr. Bromley has agreed with Mr. Darman that OMB and OSTP will work closely together at all staff levels in developing the President's R&D budget proposals for the Congress. The usual cooperation and coordination between OSTP and all the R&D agencies will be strengthened. Detailed budget and programmatic crosscuts will be utilized in certain areas, in ways analogous to those used by OSTP, OMB and the FCCSET Committee on Earth Sciences in determining the program and budget for global change research in fiscal year 1990.

This process is already under way for the FY 1991 budget, and will occupy a significant fraction of OSTP staff time and resources for the next several months.

Dr. Bromley has agreed with Mr. Darman that OMB and OSTP will work closely together at all staff levels in developing the President's R&D budget for the Congress. In selected areas of unusual breadth, detailed budget and programmatic crosscuts will be used by the two agencies in ways analogous to that used for fiscal year 1990 to establish the national program and budget for global change research.

Indeed, we are currently strengthening the OMB-OSTP relationship by working closely with OMB to select cross-cutting research topics in addition to high-performance computing and global climate change research. Once agency data in these areas is collected, OMB, OSTP, and the other relevant Federal agencies will meet to discuss and coordinate, where appropriate, the various agency research programs.

The results of these interagency meetings are expected to be valuable in the final preparation of the President's budget. In future years, it is expected that OSTP, OMB, and relevant FCCSET committees, such as the Committee on Earth Sciences, will work with the agencies to insure coverage of critical areas and programs at the beginning of, and throughout the budget cycle, not just at the end.

Of necessity, this proactive stance will address only a relatively few high-priority areas. The areas under consideration will be dictated by these current considerations and will change from year to year, so that over a four-year period all major R&D areas will have a detailed examination.

Finally, it should be noted that OSTP staff and FCCSET committees will not play the role of budget examiners. This is the responsibility of OMB. Rather, the OSTP role is to assure that allocation of scarce budget resources at the broad scale is consistent with the national need and that the available funding is used with maximum effectiveness and efficiency. The related FCCSET committees will provide the expertise to translate this broad policy guidance into the required programmatic and budget detail.

QUESTION: OSTP traditionally has played an important role in advising the President and others on the scientific and technical aspects of defense and space issues. What will be the relationship between OSTP and the National Security Council and the National Space Council? Will much of your time and Dr. Bromley's be spent in advising the President on defense and space policy?

ANSWER: Dr. Bromley is a member of the National Space Council. Space policy issues will be dealt with primarily through that Council, and it is expected that OSTP staff will participate in Space Council working groups. This interaction should be two-way. For example, Space Council staff would be expected to be closely involved with OSTP staff in dealing with international aspects of "megaprojects", one of which is the space station.

The National Security Council (NSC) has very broad responsibilities in advising the President on foreign policy issues. Many of these have important science and technology components. Within the framework developed by Dr. Bromley and Gen. Scowcroft, should I be confirmed, my staff and I anticipate developing close working relationships with NSC staff in those areas of common interest.

QUESTION: The nation as a whole is doing a terrible job in providing our elementary and secondary students with sound education in science and mathematics. Yet the resources available to Federal agencies for science and mathematics education are quite small compared to what states and localities spend.

- o In your view, what are the most effective two or three steps the Federal government can take to improve the current dismal state of science and mathematics education?

ANSWER: First, let me emphasize that the responsibility for precollege education in this country has been and will continue to be predominately at the local level. At the conclusion of the recent Education Summit in Charlottesville, Virginia, the President and governors noted that state and local governments provide more than 90 percent of education funding, and that "education has historically been and should remain, a state responsibility and a local function." I agree completely with this view, and accept it as a boundary condition for OSTP activities related to mathematics and science education.

It is important to emphasize that a significant number of the nation's governors have responded with innovation and creativity to the problems of our educational systems so starkly outlined in the report A Nation At Risk: The Imperative for Educational Reform (National Commission on Excellence in Education, April 1983).

There is, however, wide agreement that the federal role in education-- though limited--is important. Historically, the federal role in mathematics and science education has been greater than in general education, as witnessed by the plethora of new

federal programs established and funded following the launch of Sputnik in 1957.

As noted in my response to another question, should I be confirmed I expect to become involved immediately in three initiatives that will address the science and mathematics education challenge:

- o implementation of the Senate Appropriations Committee directive that OSTP take immediate steps to improve coordination between the National Science Foundation and the Department of Education with regard to programs aimed at improving mathematics, science and engineering education.
- o establishment of a Committee of the Federal Coordinating Council for Science and Technology (FCCSET) that will deal comprehensively with federal agency matters relating to mathematics and science education, from kindergarten through graduate school. This committee would coordinate the actions of a wide variety of agencies that are responsible for science literacy, that utilize and/or support the training of scientists and engineers: the committee, working with OSTP and OMB, would also attempt, for the first time, to develop an integrated national budget for science and mathematics education.
- o appointment of a panel of the President's Council of Advisors on Science and Technology (PCAST) to study and report on the federal role in science and mathematics education. This effort by a group of distinguished experts outside government will complement the FCCSET committee's activities inside the government.

I should add that OSTP will take steps to bring together these internal (FCCSET) and external (PCAST) groups. OSTP will not attempt to establish the detailed agenda for these important initiatives. However, illustrative of the types of federal action that would no doubt be considered by the FCCSET panel are the following:

- (a) to cooperate with the governors and educational leaders in establishing national education goals which include performance goals for student achievement for mathematics and science;
- (b) to support research and development in mathematics and science education;
- (c) to identify and disseminate important new programs and practices in mathematics and science curriculum

development, teaching methods, and teacher preparation; and

- (d) to capture and sustain the will of the nation to achieve a mathematics and science education program second to none other in the world.

- o What should be the respective roles of the National Science Foundation and the Department of Education in elementary and secondary science education?

ANSWER: The respective roles of the Department of Education and the National Science Foundation, as well as other federal agencies, would be established by the President following completion of the OSTP evaluation as directed by the Senate Appropriations Committee, the PCAST panel study, and the work of the FCCSET committee.

QUESTION: Over half the university students now receiving U.S. doctoral degrees in engineering are foreign-born. Many of these students stay in the United States, which helps our economy, some from developing countries go back to help their societies, and some go back to countries which have been major economic competitors.

- o Is it fair to say that our universities are using taxpayer funds to train the competition? If so, what are the policy implications of that conclusion?

ANSWER: Although just over half of the university students now receiving doctoral degrees in engineering are foreign-born, a substantial fraction of those remain in this country and become productive members of our technological workforce. The National Research Council concluded in its study, Foreign and Foreign-Born Engineers in the U.S.: Infusing Talent, Raising Issues, that because most foreign doctoral candidates receive their undergraduate training abroad, there is an offset to any subsidy provided by us for foreign graduate students trained in the U.S. The U.S. has not paid the cost of undergraduate training for these engineers who become permanent members of the U.S. workforce. The NRC report further stated, "if there were only U.S. students, current excess capacity in graduate engineering programs would be even larger, making current marginal costs of educating foreign students relatively low."

There is value to the United States as well in providing doctoral training for the foreign-born who return to their countries. As Dr. Bromley stated in his written statement submitted at his confirmation hearings, "It bears emphasis that our graduate

education, because of its internationally perceived excellence, remains one of our most important exports and that scientists and engineers educated here, on return to their home countries, establish and maintain communication channels--individual to individual and institution to institution--that are a vital part of our foreign relations as well as integral parts of the international science network."

- o In your view, what can and should be done to encourage more Americans to study engineering and science at the university level?

ANSWER: The pool of freshman students interested in studying engineering and science at the university level has declined by one-third over the past two decades. It is clear that neither in-school nor out-of-school experiences at the precollege level are exciting student interest in science or encouraging pursuit of scientific careers.

In school, our nation's youth must be taught by talented teachers, well-trained in their areas of specialization, who use high-quality instructional materials to create rich learning environments and implement strong curricula in mathematics and science. Our national resources--federal and state--must focus on the improvement of the quality of the teaching force and the development of exemplary instructional programs. Out-of-school, our youth must see science and science careers valued by the population at large as both useful and necessary for the prosperity and well-being of society.

Parents and the home environments shape values; there is evidence that parental expectations are closely correlated with children's participation in science and science-related activities. It is essential that government leaders help galvanize public support and attitudes of the public toward science.

QUESTION: In the years to come, women and minorities will be the two fastest growing portions of the U.S. labor force. Yet, historically, these two groups have been very unrepresented in science and engineering careers. In order to maintain a strong overall economy and to provide good job opportunities for all citizens, we must increase the number of women and minorities in these fields. In your judgment, what is the Federal role here, and what concrete steps do you propose to deal with this need?

ANSWER: The most effective way to foster increased participation of women and minorities in science and engineering is by

strengthening precollege mathematics and science programs and the quality of teachers for all students. However, the situation today is such that programs specifically targeting these traditionally underrepresented groups need to continue.

Many federal agencies have successful outreach programs designed to attract women and minorities into the sciences and engineering; these should continue. An important role of the planned FCCSET committee on mathematics and science education will be to coordinate agency efforts in this important endeavor, probably through a working group of the committee.

Effective agency programs are those which:

- (a) insure that entering students are healthy and predisposed to learning;
- (b) provide role models for young students;
- (c) provide opportunities for young students to have hands-on experiences in science and engineering;
- (d) provide financial resources in the form of scholarships, fellowships, and internships; and
- (e) provide support structures on campus during the undergraduate years.

I anticipate that both the FCCSET committee dealing with science education and the PCAST panel addressing the federal role in mathematics and science education will have much to say as to concrete steps that should be taken. Should I be confirmed, I plan to give close attention to these entities and to their advice and counsel in preparing recommendations for additional actions.

QUESTION: The United States now faces competing interests when discussing international collaboration in science and technology. On the one hand, there are strong reasons for cooperation and collaboration: Americans have traditionally supported open exchange, and we increasingly see the financial benefits of cost-sharing for large projects. On the other hand, technology is now this nation's strongest competitive advantage and something that needs protection.

- o In your view, what is the proper balance between maintaining strong national science and technology programs and entering into more international cooperation?

ANSWER: The United States generally benefits from international cooperation in research and development when there is balance, reciprocity and comparable access to government-sponsored and-supported R&D. The United States has promoted this policy through multilateral fora (e.g. OECD) and bilaterally with our trading partners (e.g. Japan).

Nevertheless, the Administration is sensitive to the need to ensure that where taxpayer money is involved, the fruits of our R&D efforts should benefit primarily institutions and companies in the United States. The Federal Technology Transfer Act, the Bayh-Dole Act, The Omnibus Trade and Competitiveness Act, and Executive Order 12591 all seek to ensure that we maintain strong national science and technology programs while we continue to reap the benefits of international cooperation.

In determining the proper balance between national and international research programs, the character of the research must be carefully considered. For example, "megaprojects" are less closely coupled to educational functions than principal investigator-initiated "small science" projects. This implies that "megaprojects" are more appropriate for international management and funding than are the research projects of individual investigators. Further, research that is clearly basic in character, with its results slated for public disclosure in the open scientific literature, is more appropriate for international support than research that is more applied, with potential commercial applications likely.

- Now that the United States and Japan have signed a new science and technology agreement, what exactly should the United States ask for in return for continued Japanese access to U.S. universities and Federal laboratories? What do they have that we would like access to?

ANSWER: It is my understanding that the U.S.-Japan Science and Technology Agreement calls for both governments to provide comparable access to their government-sponsored or -supported research facilities and activities. In the United States the best government-sponsored research tends to be done in universities and in our federal laboratories which are largely open to foreign researchers. In Japan, on the other hand, state-of-the-art, publicly-funded research tends to be done in industrial laboratories, which by their very nature, are more difficult to access, particularly by foreign researchers. The Joint High Level Advisory Panel recognized this difference in its report to the two governments, and encouraged us to make special efforts to ensure comparable access to common-based technology, wherever it is done.

Thus, the U.S. is seeking increased knowledge of and access to government-funded research in industrial laboratories in Japan.

U.S. researchers generally know less about their Japanese competitors than the Japanese know about them. This means that for true reciprocity to occur, American researchers must learn more about the status and quality, as well as the location of Japanese R&D in areas of scientific and potentially commercial importance. We are still learning how this can be done effectively. Language training is certainly one important component. Several steps are being taken to improve both the Japanese language capabilities of our scientists and engineers and our understanding of key technological research in Japan.

For example, in the last two years the National Science Foundation (NSF) has spent over \$600,000 per year to provide Japanese language fellowships to U.S. graduate students, post-doctoral researchers and senior scientists and engineers. In addition, under the U.S.-Japan S&T Agreement, there is a summer language and work program for young graduate science and engineering students; this aims to stimulate an early interest in Japanese R&D. Finally, in an effort to improve our knowledge of both basic Japanese R&D and that R&D with potential commercial implications, panels of outstanding researchers study Japanese efforts in a given field. This includes travel to Japan to view first hand Japanese basic and developmental work that is under way. A good example of this type of effort is the JTEC (Japan Technology Evaluation Program) report on High Temperature Superconductivity, resulting from such a panel chaired by Dr. Mildred Dresselhaus of MIT. This was funded cooperatively by three U.S. Government agencies.

QUESTION: Recently, controversy has arisen over the efforts by some American universities with substantial taxpayer support to increase their ties with foreign companies. What are your views on this subject? Is there a problem when universities seek to sell or otherwise provide access to taxpayer-supported research or facilities?

ANSWER: Universities in our country have a tradition of openness in communicating the results of their research. This is true at the international as well as the domestic level. The result is a very efficient system for transferring scientific knowledge between vastly different institutions and across national borders. We should not do anything that will endanger this open market for basic scientific knowledge.

Industrial liaison programs at universities are not new. They have provided avenues of communication between academia and industry for decades, to the benefit of both. What is new is that foreign corporations have recognized the potential value of basic research results generated in U.S. universities to their own future technological developments, and are aggressively seeking closer ties with American universities. I suspect that, in part, this reflects the longer time horizons companies in Japan, for example, take in translating fundamental knowledge into products.

As in other concerns over foreign access to U.S. sources of technology, the problem may not be so much that foreigners have too much access, but that American companies do not take sufficient advantage of these opportunities. The U.S. government has initiatives to increase cooperation between our industry and universities, as well as federal laboratories. These have been partially successful, but could be enhanced.

But we should not stop in encouraging American corporations to better utilize the federally-supported research in our own universities, national laboratories and government research centers. The United States should actively seek out excellent science and technology overseas, through the efforts of our Department of State, the technical agencies, universities and industry. Since symmetry does not exist between our research system and those of other countries, we cannot just emulate what the Japanese, French or Swedes are doing. But the problem of collection, analysis and dissemination of information is one that can be dealt with successfully, provided the Congress, Executive Branch, industry and universities set their mind to it. Should I be confirmed, I would assign a very high priority to meeting the challenge of providing much more information about the best foreign science and technology to users in government, industry and academia.

QUESTION: During his confirmation hearing before this Committee, Dr. Bromley stressed the importance of the social sciences. They seem particularly important in developing responses to such national problems as drug addiction and pollution. Yet traditionally they have received relatively little attention from OSTP. If confirmed, what will be your activities and priorities in this area? Will you seek an assistant director for the social sciences, and, if so, what will be that person's main responsibilities?

ANSWER: As you point out, the social sciences have received relatively little attention from OSTP in the past. Consequently, there are fewer precedents and little operating experience to provide guidance. Further, since I am not a social scientist

myself, I bring only limited intuitive capability to this area. However, my sense is that the issues coming before the OSTP that relate to the social sciences divide into the same two categories as other issues: those in which the social sciences affect policy and those related to policy for the social sciences. The challenge in the former category is to develop ways to incorporate explicitly the best knowledge from the social sciences into advice presented at the highest levels.

Problems for which this type of knowledge is crucial are many, and cover the spectrum from environmental protection and effective delivery of medical care to the alleviation of hunger and the development of a workforce more conscious of the need for quality in the production of goods and services--and more capable of providing that quality. In the latter category, coordination and characterization of federally-supported research in the social sciences and dealing with the associated budget priority issues seem to be the most immediate needs. In this context, the role of the Federal Coordinating Council for Science, Engineering, and Technology (FCCSET) and the President's Council of Advisors on Science and Technology (PCAST) must be determined.

Should I be confirmed, I would expect to assign a high priority to these and related questions dealing with the social sciences. As for appointment of an assistant director for the social sciences, this will be done as soon as budget and civil service constraints are resolved. Should these constraints make it necessary to wait until the 1991 fiscal year for the actual appointment of the assistant director, interim staffing arrangements will be put in place for the remainder of fiscal year 1990.

QUESTION: Two important issues currently before this Committee are research on global environmental change and the implementation of the proposed high-performance computing initiative.

- o What role do you personally expect to play in these areas, especially on the international aspects of these subjects?

ANSWER: Global change is, by definition, a problem which knows no national boundaries and, therefore, is an issue involving intense and complex international interactions. In fact, there are many existing and proposed international agreements which are directly or indirectly relevant to global change. I shall be working closely with the OSTP Assistant Director for the Environment on the international aspects of these issues, including specific international agreements, to help insure that there is effective interagency coordination and that strong interagency U.S. positions are developed on international environmental issues.

Should I be confirmed, I expect to participate in meetings with individual Science Advisors and Ministers from other countries, along with Dr. Bromley. I should mention that Dr. Bromley currently chairs the Domestic Policy Council's working group on the global environment. I shall also participate in or give guidance, as appropriate, for work at the upcoming intergovernmental meetings on global environmental change, and participate in discussions with members and staff from the Congress on the international aspects of a variety of environmental issues and legislation, including global climate change.

As for the high-performance computing initiative, its international aspects are not as pervasive as in global environmental change. The education and training questions are, however, of crucial importance and, should I be confirmed, will receive my close attention.

- Do you and Dr. Bromley intend to continue to use committees of the Federal Coordinating Council for Science, Engineering, and Technology (FCCSET) to develop and implement policy on such issues as global change research and computers?

ANSWER: Yes. The Committee on Earth Sciences has proven such a successful mechanism for coordination of scientific information and resources for the development of national and international policy on global change issues, that we intend to use it as a template for addressing the issue in the future. This includes both programmatic and budgetary questions that arise within the context of overall federal responsibility.

- Who at OSTP is currently engaged in discussions with OMB regarding FY 1991 budget requests for the initiatives on global change research and high-performance computing?

ANSWER: The close cooperation with OMB involves all the OSTP staff, and various cross-cutting issues will probably involve most, if not all, senior staff on one or both of these two important issues. Dr. Nancy Maynard, Assistant Director for Environment, OSTP, is coordinating discussions regarding funding of research on global change. Similar coordination in the high-performance computing area will come under the purview of the Associate Director for Physical Sciences and Engineering, who is expected to be named shortly by the President.

STATEMENT OF DR. J. THOMAS RATCHFORD

Dr. RATCHFORD. Senator Rockefeller, you are certainly correct in that the U.S.-Japan science and technology agreement is one of the most important that this country has entered into in recent years.

It is one, so far as I understand it, that has been largely unfulfilled. We have not been able to get as many U.S. researchers in Japan as we would have liked. The reasons for this are several, one of which—or two of which you alluded to in your remarks: the lack of interest and language capacities on the part of Americans, and the difficult social and professional barriers to overcome for those Americans who do go to Japan.

I should point out that it is my understanding that Dr. Bromley will very shortly assemble the distinguished U.S. members of the high-level Committee and the Working Group under that agreement, and I would anticipate that over the months ahead a substantial amount of my time, should I be confirmed, and the efforts of other staff at OSTP will be devoted to making that science and technology agreement work as it was originally perceived.

[The statement follows:]

STATEMENT OF DR. J. THOMAS RATCHFORD

Mr. Chairman and members of the Committee, I am honored to appear before you today as the President's nominee for the position of Associate Director of the Office of Science and Technology Policy in the Executive Office of the President. Should I be confirmed, I look forward to discharging the responsibilities of this office with enthusiasm tempered with humility, and in a manner consistent with the best traditions of public service.

First let me briefly introduce myself. My graduate education is in physics, with a doctorate from the University of Virginia. I came to Washington on a one year leave of absence from the Washington and Lee University faculty in 1964 to administer a federal research program in my specialty, solid state physics. That one year has since stretched into 25.

In the late 1960's, somewhat as a lark, I spent a year as a Congressional Fellow of the American Political Science Association. That did it. The relationship between science, technology and public policy captured my imagination, and I have been involved in it ever since. Seven years on the Hill following the fellowship, and my responsibilities with the American Association for the Advancement of Science (AAAS) since 1977, have continued to fuel this interest. At AAAS my portfolio includes all our program activities, encompassing international science, science education, and interactions between science and policy.

Should I be confirmed, the basic task that I shall share with the director and the other three associate directors--along with all members of the OSTP staff--will be to provide the best, most reliable information, analysis and advice to the President on matters related to science and technology. Public Law 94-282, the National Science and Technology Policy, Organization and Priorities Act of 1976 provides the intellectual as well as legislative framework for this task. President Bush devoted a substantiated portion of his February 9, 1989 document accompanying the fiscal year 1990 budget, "Building a Better America," to science and technology. The blueprint provided by the President in this document for strengthening U.S. science, technology and education sets a standard by which OSTP and the agencies will be judged in the months ahead.

Meeting the high expectations for OSTP will not be easy. Given the limited staff and financial resources available to it, OSTP must restrain itself to developing broad policies and coordinating agency

programs at the macro level. Eschewing temptations to micromanage, the office must trust the agencies to implement these broad policies.

Dr. Bromley has already demonstrated his willingness to work closely with members and staff in the Congress. For me this is especially attractive, given my experience in these halls. I look forward to working with this committee, the other legislative and appropriations committees, and the Congressional support agencies. Although we may in some cases disagree on interpretations and conclusions, striving for a shared knowledge base--within reasonable bounds of uncertainty--should make all our jobs easier and benefit the nation as a whole.

Mr. Chairman, if I may be permitted a philosophical digression, I should like to say a few words about why science and technology are so important to presidential decision-making--and also to Congressional decision-making. The basic truth here is that if your science is wrong, all policy decisions that depend on it are at risk. By the same token, however, science and technology cannot provide all of the answers to many--probably the vast majority--of our most troubling problems. Mathematicians would say that getting the science right is a necessary but not sufficient condition to deriving the correct policy conclusion. Moral and spiritual values, ethics and esthetics, perceptions of human nature--and sometimes just plain old politics--can be of greater importance than the scientific aspects.

Mr. Chairman, should I be confirmed, my responsibilities at OSTP would include policy and international affairs. Major elements of the policy sector would be science education and the social sciences. These and other parts of that portfolio will be approached from an internal governmental agency perspective, utilizing committees of an upgraded and expanded Federal Coordinating Council for Science and Technology (FCCSET). Through panels of the President's Council of Advisors on Science and Technology (PCAST), a parallel, but nongovernmental perspective will be provided on these same problems.

Science education deserves a special word. There is almost no major national issue--national security, international economic competitiveness, the environment, or continued domestic economic growth--that does not depend heavily on our having a well-educated populace, especially in mathematics and

science. Without a work force comparable in quality to that of our major trading partners, we shall remain, as the National Commission on Excellence in Education titled its 1983 report, "A Nation at Risk.. .."

There are many challenges in the International Science and Technology arena. One to better utilize science and technology as tools in our foreign policy. Another is to deal coherently with the so-called "megaprojects" we and other nations are struggling to fund and manage. Should I be confirmed, these and related issues will receive immediate and substantial attention.

Mr. Chairman, I have provided in writing answers to a number of questions by Chairman Hollings. I trust the detailed answers that address these and other matters of interest to the Committee are helpful. I shall, of course, be happy to expand on these answers, or respond to additional questions as you wish.

In closing, I should like to state for the record why I am looking forward with such enthusiasm and excitement to serving as Associate Director of the Office of Science and Technology Policy, should the Senate confirm my nomination. During his confirmation hearings Dr. Bromley stated that "I am here because I really do feel that working together with my colleagues in the White House and here in the Congress, that we can make a difference." That sums up my feelings precisely. I feel with all sincerity that the Office of Science and Technology Policy, under the leadership of Dr. Bromley, can make a difference for this Administration and the nation. It is therefore with a deep sense of humility--and of purpose--that I ask you to look favorably on my nomination. Thank you.

Senator ROCKEFELLER. It is an interesting phenomenon and I would address this question, Dr. Bromley, both to you and to Dr. Ratchford. We have discussed before Dr. Bromley not only with respect to the science and technology agreement but also the Japanese technical literature, our unwillingness to seem to be interested in what it is that the Japanese publish but do not translate.

How do you read the state of America's industrial and scientific curiosity and the willingness to follow through on it with respect to clear advances in Japan?

I have been enormously frustrated by the reaction of major companies and mid-sized companies, which frankly ought to know better when they are clearly behind in research, or at least in product application. Somehow they feel they do not have that much to learn from the Japanese, the not-invented-here syndrome.

It is frustrating, and it must be enormously frustrating to both of you. Do you see any change? Dr. Bromley, you have been at work now for some time. Can you reflect on that?

Dr. BROMLEY. I believe, sir, that I am reasonably optimistic that in fact there will be a change, and I think the change is being driven primarily by a growing recognition in the private sector that it is essential that in their own self-interest it will be important for them to begin to take advantage of the kind of facility that you, sir, have provided, where they can get access in more or less real time to the new developments that are taking place in Japan.

This is particularly true, I think, because the Japanese, as you well know, are themselves now targeting area after area of frontier technology and are also, distinct from the past practice, doing first-rate basic research in those areas. It is doubly important for us to be aware of what they are doing and to be in a position to implement and utilize what they are doing as it becomes available.

We simply cannot afford to give any aggressive competitor the six-month-to-a-year time lead that is built in if we are not aware of what is going on when discoveries first become public.

I think that the awareness that I sense throughout our entire industrial sector is growing, and I am optimistic about that. I wish it would happen much more rapidly than it has. It is a situation that we as a Nation can ill afford to have continue any longer than is absolutely necessary.

Senator ROCKEFELLER. Dr. Bromley, you continue to keep a paternal eye on that little unit in the Department of Commerce?

Dr. BROMLEY. Indeed.

Senator ROCKEFELLER. Good.

I thank you gentlemen very much, and I thank you, Mr. Chairman.

Senator GORE. Senator Kerry.

Senator KERRY. Thank you very much, Mr. Chairman.

The Chairman has advised me, Dr. Bromley, that you need to try to leave as soon as you possibly can, so I would like to direct a few questions your way, if I may, though I know you came to introduce these fine gentlemen. They are, indeed, the nominees before us at this moment.

I do have some questions, and I do not want to repeat every question asked by Chairman Gore, but I applaud his questions. I think he was relatively restrained, in some of the questions and certainly

in his response given where we are and some of the answers that we received relative to where, at least many of us believe we ought to be but more important, frankly, relative to where the administration itself has said it is and ought to be repeatedly. I might go into that in a minute.

Let me just ask you, how do you think it looks for the head of the Environmental Protection Agency to be left, really, to his own devices, cast adrift in a sense, and have it said to him, it is your decision, if you want to go to the Netherlands, fine, if you do not want to go, that is your choice?

Is that sending a message to those other countries that have assembled there and, indeed, to the world environmental community that the United States cares about this at all? Do you think it does?

Dr. BROMLEY. Senator, I am unaware of any such conversation.

Senator KERRY. Let me quote to you according to the White House spokesman, Stephen Hart. This was in the Washington Post, I believe, yesterday. "The decision is Mr. Reilly's to make." That is the quote. "Last week Reilly said he would attend the conference. The sources added that most members of the group chaired by the President's science adviser, D. Allan Bromley, also expressed opposition to U.S. participation at the meeting of 70 environmental ministers next month in the Netherlands."

Dr. BROMLEY. Senator, I can only say that you as well as I know full well that the accuracy of leaks is not notably high.

Senator KERRY. Is that accurate? Did you oppose it?

Dr. BROMLEY. Sir, it would be quite improper for me to tell you what went on in detail at the meeting.

Senator KERRY. Then we have to rely on the leaks; correct?

Dr. BROMLEY. If you prefer, sir.

Senator KERRY. I do not prefer. I prefer to have you give me an answer.

Dr. BROMLEY. As I say, sir, it would be improper for me to repeat what goes on within the confines of a domestic policy council working group meeting.

Senator KERRY. It is improper for a member of the President's advisory group to tell the United States Senate Committee responsible for oversight and which was responsible for your confirmation what you advised as to a trip by somebody, whether or not they should go to the Netherlands and represent the administration?

Dr. BROMLEY. Senator Kerry, the working group was discussing a whole series of options. What you have found in the Washington Post is a result of a leak which is in no sense complete.

Senator KERRY. Is it accurate as to whether or not you want Mr. Reilly to go to this conference? Do you or do you not want him to go?

Dr. BROMLEY. I am clearly going with Mr. Reilly as a member of the group.

Senator KERRY. Do you want him to go? Do you think it is advisable? Do you think this is what you want to have happen? Do you want him to go?

Dr. BROMLEY. As I said, sir, I am going with him. I am a full-fledged member of his group, supporting him in every way I can.

Senator KERRY. Do you support his going?

Dr. BROMLEY. That is a question that is part of the workings of the DPC working group which I respectfully could not answer, Senator.

Senator KERRY. I would suggest that if you could answer it in the affirmative, you would be proud to come up here and sit in front of us and say, you are darn right, I wanted him to go, and we are taking leadership on this. There would be no issue.

Why does the question of whether or not the Environmental Protection Agency leader and the United States going to the Netherlands even have to be an issue? What is the secrecy about this? What is the secrecy about this? What is the big deal?

Dr. BROMLEY. My hope, Senator, would have been that there was no big deal involved. This was a series of supposedly private discussions among the President's senior advisers working toward developing a governmental position. We are still working toward developing that position, and we will continue those discussions, as I indicated, this coming Monday in a meeting chaired by Mr. Reilly in Mr. Reilly's office.

Senator KERRY. I have to tell you. I have only been here for five years now, and whether or not I will come back is subject to the voters in my state. I am really frustrated, I have to tell you. This process gets reduced to silliness.

You read Time Magazine with the big Thomas Jefferson or whoever it is with a teardrop coming down his eye questioning George Washington, questioning whether government is even working. This is why the questions are being asked. It really is.

Let us go back to the beginning. Secretary of State Baker in his first big policy speech addressed the first meeting of the IPCC's response strategies working group, and he said, "We can probably not afford to wait until all the uncertainties have been resolved before we act. Time will not make the problem go away."

Now that was terrific, well received, good rhetoric, good policy, just like the rhetoric that the Chairman referred to in his opening statement about the White House effect. He cited CFC emissions, energy efficiency and reforestation as examples of steps we ought to be taking right away. That was January.

It is now November. Almost ten months of an administration's 48 months in office have gone, and nothing has happened in any one of those areas. There is no reforestation plan. There has been a following of Europe's leadership on CFCs. It seems to me on energy efficiency we have cuts in the budget on the most important research in those areas.

Now I am not trying to make a speech here, but I am just stunned by the lack of leadership here I am stunned that your answers, your nonanswers, are their own answers. They really document the degree to which we are adrift on this.

Now can you tell me why it is we have been unwilling to move forward? I know the Chairman asked this, but I am not satisfied. Why can we not move forward on the global convention, given what Secretary Baker said?

Dr. BROMLEY. My understanding, sir, is, as I have said before, that we are waiting for the IPCC process to work its way out, and we hope and are told that we will have the results by late summer or early fall of 1990.

Senator KERRY. That is certainly not adhering to what Secretary Baker said, is it?

The President pledged to host the conference on global warming himself in 1988. Why are we not doing that?

Dr. BROMLEY. The President clearly has an interest in doing this.

Senator KERRY. Why are we not doing it? What does it take? You know, a week after you get into office you bring in the head of the Environmental Protection Agency and a few other people and you say I want to host a conference, let us begin to plan it, what is the date, and when do we do it.

Has that meeting occurred?

Dr. BROMLEY. That meeting has not occurred. We, sir, are waiting for the IPCC process to work its way out.

Senator KERRY. Let me read what Secretary of Energy, James Watkins, said in May of this year. "Our efforts here today will demonstrate that there are a number of prudent and cost effective energy responses already justified on economic and national security grounds which must be implemented now."

Have they been?

Dr. BROMLEY. A number have.

Senator KERRY. Which ones? The ones you listed?

Dr. BROMLEY. The ones I listed for the Chairman.

Senator KERRY. Well, I do not accept those as being initiatives of the administration.

Senator GORE. Let me say that we will hold the record open for you to elaborate on that list if you wish to respond to the assertions of Senator Kerry with which I agree; that that is kind of a hodgepodge list of things the Congress has tried to do over the opposition of the administration.

If those are unfair characterizations, we want to hold the record open for you to respond.

Senator KERRY. I certainly agree with that and would welcome a listing. In June at the conference in Paris, the G7 governments signed a very strong communique which was cause for positive feelings about this, and let me quote. The President signed this. "We strongly advocate common efforts to limit emissions of carbon dioxide and other greenhouses gases which threaten to induce climate change, endangering the environment and ultimately the economy."

That is in direct contradiction to what you just said about the IPCC's 1990 date for further study, is it not?

Dr. BROMLEY. No, I do not believe so, sir. The question is purely one of timing. We believe that it is improper for us to move forward and preempt the results of the working groups which we were instrumental in setting up.

Senator KERRY. I am again——

Senator GORE. Would the Senator yield briefly?

Senator KERRY. Absolutely.

Senator GORE. One point that needs to be made is that the framework convention could be negotiated and put in place without specific mandated reductions so that the process could be completed while the research is continuing.

I personally believe we already know far more than enough to justify reductions in emissions and other steps of that kind, but the

administration is currently opposing even the negotiation of a framework convention which could later be supplemented by specific protocols.

This is the design of the Dutch Minister of the Environment and others in the world who are pushing for this agreement.

Let me suggest that if we have other questions of Dr. Bromley—

Senator KERRY. I was just about to move on to those questions.

I simply would say, Doctor, I know you came to this, and I remember our hearing when we talked. I have been around government long enough to tell the difference between bona fide leadership and genuine urgency in the governmental process and a status quo and even contradictory forces working within the administration and elsewhere.

I must confess to you that I do not see the kind of urgency of meetings and the kind of pressure being placed on individuals to come up with answers and the kind of directives being issued that demonstrate leadership on this.

When I look at what has happened with Margaret Thatcher's leadership on the conference and I look at the Dutch and the way we treated them with respect to meeting there and so forth, it is very clear to me that we are simply not leading in the way that I think Senators Gore, Wirth, Chafee, Heinz and so many others are advocating and which, incidentally, so much of the scientific community has suggested is prudent.

I genuinely hope that we will move, and soon.

Let me turn, if I can, to our nominees very quickly.

Dick, I do not want to belabor this too long. I share the feeling of Senator Rockefeller about your qualifications and your ability, and I am delighted that there are four positions being filled. That is keeping with what we had earlier discussed. I think that is very important for this field.

Obviously in Massachusetts we have a number of interests in this field, and I am particularly interested in Dr. Wyngaarden just commenting for a moment about the prospects with respect to biotechnology and whether or not you think there are some steps we could specifically be taking at this point that might enhance the ability of some of these companies to be able to move forward in that very important sector of potential future markets.

My concern obviously is with the cost of capital in this country. There is about a \$31 billion venture capital pool which is behaving much as normal investment money behaves rather than as true venture capital. A lot of these companies are having trouble getting the money that they need to hold the line for the longer term gains that may be there.

There is an important recent trend line showing that beginning profitability has moved up for about a quarter of them, and many of the rest are now showing less losses.

Do you think you will be developing and pushing for a policy that assists us in moving into that field? If so, what do you think that might be?

Senator GORE. If I may interject before you respond, Dr. Wyngaarden.

I am advised that Senator Bryan does not have questions specifically for Dr. Bromley.

Senator BRYAN. That is correct.

Senator GORE. Before you answer, Dr. Wyngaarden, the committee would like to excuse Dr. Bromley, again with our thanks for rearranging your schedule to be here.

Let me say that since this is the first time you have come up since the confirmation hearing, I want you to leave with the full knowledge that the committee's personal respect for you as an individual is undiminished and the conclusion of our confirmation hearing still holds that on most things we think you are doing a great job.

On global climate change, however, I know I speak for myself and Senator Kerry. I will not attempt to speak for others who have not addressed the point. I am extremely disappointed that with the changes under way in the global environment the President's science advice would be as it apparently is on this question.

You know our feelings, and we deeply appreciate your attendance here today. Thank you.

Dr. BROMLEY. Thank you, Mr. Chairman.

Senator GORE. Excuse me, Senator Kerry and Dr. Wyngaarden.

Dr. WYNGAARDEN. Senator Kerry, I think there are a number of things in this field that fall very much within the responsibilities of the Office of Science and Technology Policy.

First of all, we have a vigorous research effort in biotechnology. In fact, the field, to a large extent, grew out of research supported by the Federal Government, chiefly through the National Institutes of Health and NSF in its backing of genetics research in the 1950s and immunology research ever since then.

And I think it is important, first of all, that that support remain high and that the research go forward.

We have, in this country, paid less attention to the next step. That is, the implementation of research findings and the exploitation of them by industry.

Senator KERRY. I am sorry, the what?

Dr. WYNGAARDEN. The implementation and the development of those technologies. And there are a number of points to be made there. One is that the revision of the Technology Transfer Act a few years ago introduced new mechanisms for bringing scientists closer together in federal laboratories and in industry, and that is happening.

There are a number of cooperative research and development agreements, for example, that we could point to in that respect.

There is also the general area of generic applied research, which has received relatively little attention in the United States. It is an area in which our foreign competitors, particularly the Japanese and the Europeans, are considerably ahead of us.

I have already had discussions with Dr. Bromley and Dr. Ratchford about addressing that issue to see whether we should be doing more than we currently are doing.

We have also the general area of the coordination of crosscutting issues among the several agencies that have legitimate activities in biotechnology. That is an important function of the Biotechnology Science Coordinating Committee.

We expect to involve the advisory committee, the so-called PCAST, in a much more active way. And in fact, one of the early steps that I have discussed already with Dr. John Moore, who will become the new chairman of the BSCC, is a retreat-type of meeting that would bring together the new members of the BSCC and counterparts from the private sector, from industry, from the state biotechnology offices, from academia, for a free discussion as to how we could function more effectively in promoting the welfare of the biotechnology industry, while also appropriately regulating products based on principles of risk evaluation.

And all of these things I think will take place, in addition, within the area of the life sciences divisions of OSTP. We have plans to appoint an assistant director for biotechnology, should the budget permit that this year. If not, certainly within a year.

All of these comments indicate that I understand the questions you have raised and agree with them; that is, in an area in which we have to review our stance and our options very carefully and perhaps do more than we have done to make sure that the health of this industry in which we have a substantial lead in the world remains very good.

Senator KERRY. Do you believe in the so-called incubator concept, centers of excellence? Do you think those are important to the breeding of that technology?

Dr. WYNGAARDEN. Yes. But I would also stress the fact that we have a pluralistic system in the support of research in this country. We place a heavy emphasis on the individual investigator, the so-called investigator-initiated research. Many of the most stunning developments come out of that kind of support.

In other areas it is important to bring scientists together in coordinated programs or centers, and we support that kind as well.

The National Science Foundation has taken a particular lead in setting up technology centers. Some of those are addressed primarily toward biotechnology; others are different areas of technology.

I believe that all of these approaches are useful.

Senator KERRY. The questions that were submitted by Senator Hollings and the committee raised the issue of drug research, et cetera, and I wonder if it is your sense that—you pointed out the \$240 million in drug abuse research programs—is the research effort trying hard enough to find some kind of medical treatment for drug addiction, including the possibility of some sort of counter-vailing drug for crack cocaine?

Dr. WYNGAARDEN. Yes. That program is centered primarily in the alcohol and drug abuse and mental health administration, part of the Public Health Service, and within that, in the National Institute on Drug Addiction, the so-called NIDA. And they have had a program for many years in this general area.

A few years ago a specific program in drug development was initiated, and that has as its goal the development of drugs, including clinical trials and licensure, that would interdict the craving habit or counteract the effects of cocaine and other drugs.

I understand that there is some progress in that area. Obviously, that is a long-term goal, and progress will not be immediate. But there are some drugs which, I am told, do affect the craving of animals for cocaine, for example.

It is a very important development but obviously only part of a much broader approach to the problem, but it certainly is an important component and must go forward.

Senator KERRY. I have really taken more time than normally I would get. If I could just have one last question for Dr. Ratchford, and then I will stop. And I have to go to another meeting anyway.

But, Doctor, your comments talked about, in answer again to the committee questions, the mathematics/science problem that we have in terms of education. And you cited the federal role as being crucial, while at the same time paying respect, obviously, to the local funding and so forth.

We have been hearing now almost for, gosh, about seven or eight years or more, this concern about math/science. And for all of those seven or eight years we continue to lose a foothold, relative to other countries against whom we compete.

And I guess my question really is, notwithstanding the local role and local funding, are you prepared to or do you think we ought to take slightly more draconian carrot measures at the federal level in order to try to address this? Can we afford to continue to slip here? And what do you propose, specifically, to try to do in your tenure to try to deal with it?

Dr. RATCHFORD. Senator Kerry, the specific answer to your question is that we cannot afford to continue to slip backwards. If we are going to be competitive with our major trading partners, we have to be equal with them in the quality and quantity of our work force, as well as in our scientific and technological research.

The answers that I had provided to Chairman Hollings did note that we historically, in this country, have had a relatively minor role for the Federal Government in science and math education, and education generally up through the 12th grade.

The situation has been very different with respect to graduate education and research. That is an area that we are not as crucially concerned with fixing, except that we should maintain our current world-class position in graduate research and education.

There are three things that I would see OSTP doing, however, in the short-term.

First, we do plan to respond to the directions of the Senate Appropriations Committee to look into the issues regarding coordination of math and science education programs between the National Science Foundation and the Department of Education.

There are two other steps that we see, both of which are institutional in part.

First, the establishment of a new committee within the Federal Coordinating Council for Science, Engineering and Technology, the so-called FCCSET structure, a new committee that would address problems in science and math education, coordinating the activities of all of the federal agencies and defining needs on a federal-wide basis.

This would go beyond just looking at the coordination of the National Science Foundation programs and those of the Department of Education.

And third, to bring the benefit of the private sector, the non-governmental expertise, to bear on this issue. Dr. Bromley has already agreed to appoint, early on, a panel of the President's Council of

Advisors on Science and Technology (PCAST) that would specifically study and make recommendations concerning the federal role in science and math education.

It is clear that at this point one cannot predict the outcomes of these studies, but we do plan to try to hit the ground running in at least searching for the kinds of answers that you, I believe, are looking for and that we will be looking for as well.

Senator KERRY. Well, I appreciate your answer, and I just hope we will not get overly bogged down in a whole new set of studies that try to reinvent the wheel.

I mean, in the last 15 years, I think almost every suggestion about potential carrots, grants, mandatory, have been scoped out. And, I think that is part of the reason why we have been slipping these last seven years. And so I hope we will get that moving, and I wish you well.

Dr. RATCHFORD. Senator, if I could just add one comment. The three actions that I referred to are somewhat different from most of the earlier studies in that they are operationally oriented, rather than just philosophically oriented.

Senator KERRY. Good. Well, I appreciate that. Thank you.

Thank you very much, Mr. Chairman.

Senator GORE. Senator Bryan.

Senator BRYAN. Thank you very much, Mr. Chairman.

Dr. Wyngaarden, I would like to shift the focus of the inquiry a little bit to AIDS. You have had quite an extensive background with your former position. And all of us in the Congress are very much aware, in a very general sense, that it is an enormous public health problem. I must say that it was brought home to me in a rather personal and direct way.

My son is completing his last year of medical school, he is in San Francisco in a private hospital doing a rotation, and he said to me the other night, Dad, he said, three out of four patients in this hospital are AIDS patient. And he says, I have had some experience with terminal patients, but to see young people in the prime of their lives struck down, he says, it is something that I have not yet experienced. Most of the terminally ill have been people who have chronic problems relating to long-term aging mortality incidents.

And I guess my question to you would be where are we on this? Are we any closer to a vaccine, a medical breakthrough? Can you discuss that a little bit with me, and also the trend lines? I mean, we hear that, at least within the homosexual community, perhaps the rate has stabilized, and with the IV drug users that were off the chart.

Enlighten us, if you would, Doctor, based upon your own rather extensive experience.

Dr. WYNGAARDEN. Let me say something about the latter question first.

The demographics have shifted somewhat in recent years. Early on AIDS was primarily a disease of the gay population, the male population primarily. As you have indicated, the incidence has changed somewhat there, with education and behavior modification, and the current trend is more toward new cases arising in the drug abusing community. This segment, although a small fraction of the whole is becoming larger.

There is also a relative increase in the incidence of AIDS in young people. It has become, for example, the seventh leading cause of death in males between the ages of 15 and 24. Those individuals probably had acquired infection, on average, a decade earlier. So there is some concern about the shifting demography involving more heterosexual transmission, both as a result of drug use and early sexual experience of teenagers.

With respect to development in the research area, obviously the program is approaching the AIDS problem at every conceivable level. This includes basic studies on the nature of the virus, on through population studies and clinical trials of new agents. We do have one agent that is very well known Azidodeoxy Thymidine, AZT, and we are discovering as time goes on, more uses for it.

For example, we now have evidence that it may be wise to use the drug earlier in HIV-positive individuals, that it may delay onset or even ameliorate the course of the disease.

In addition, there are other agents under trial. Some of them have degrees of promise. You perhaps have heard of the drugs called DDI and DDC. These drugs have had a trial in certain specific situations and look rather promising.

The toxicities are different from that of AZT. The possibility exists that alternating drug programs, with AZT and one of these new ones, may be as effective but less toxic to the person taking them.

DDI has also been quite effective in limited studies of children with AIDS who had severe neurological involvement, with reversal of some of these disabilities, at least temporarily.

As we learn more about the virus, we learn more about potential points of vulnerability. Many experts in this field envision a program in time that consists of the simultaneous use of multiple drugs that attack the virus at different points, or affect the cells at different points, in the same manner that we now use multiple drugs in many, many chemotherapy programs for cancer where multi-drug regimens are the rule rather than the exception. We will probably come to that in AIDS as well.

The vaccine issue is much more complicated. This is a very difficult virus because it changes immunological makeup as it resides in the cell. It's also very difficult to develop a vaccine for a virus whose DNA hides within the genetic machinery of the cell.

It is a sanctuary situation once the individual is infected. There is a lot of attention being given to the matter of vaccine development, new strategies are being approached, but I think everyone realizes that that is likely to be a long, slow process to develop vaccines and that new strategies will be necessary.

All this brings us back to the fundamental point that prevention is still by far the best strategy. It has to be since we have no cure for this disease and no way of preventing it by vaccines at the moment. So, we need to put a very heavy emphasis on prevention, and a lot of education of young people should be taking place that is now taking place only a scattered or sporadic matter. A lot more emphasis needs to be placed there.

Senator BRYAN. Let me just need to extract a couple of questions from what you just shared with us.

Is the infection rate generically in the population as a whole aside from the shifting demographics that you shared with us from the homosexual population to the drug abuser population? Are the numbers going to be as large overall as were projected, say, five years ago? Do we see a trend downward about the same as projection or greater than? Could you give us some relative magnitude of where we are?

Dr. WYNGAARDEN. It is my understanding that the CDC estimates have not changed very much over this period of time. There is a lot of uncertainty in modeling of that sort. Much depends upon the assumptions and on the validity of sampling data.

There is a lot we do not know about sexual practices in this country. As you know, there have been several attempts to devise acceptable community studies that would give us the kind of information that is needed to give a much more precise answer to the question you just posed.

We do not really have that information, although there is a test sample being conducted at present in Texas that may give us some guidance as to how such surveys might be done within acceptable bounds and with due respect for privacy. We need such information to be able to do the kind of modeling that would be necessary to give a more precise answer to your question.

Senator BRYAN. In terms of the public policy and clearly the public health implications you are suggesting, I believe, that insofar as we can accurately forecast, the CDC data base projections are about the best as policy makers that we would have at this point to rely upon.

Dr. WYNGAARDEN. Yes. There are other modelers that have thought those figures were a bit low, as you know. There is such a wide range of error in the present estimates that we could be off some. But I think it is also important to say that as we have tracked the actual development of the epidemic, the figures have followed rather closely the early CDC projections, which should give us some confidence in those numbers.

Senator BRYAN. A couple of other general questions on the subject. The role of the FDA in making new drugs available when in a testing sense that are not perhaps fully certified, your comment was that we are we doing as much there as we need to do? I mean, is that process working?

I am just old enough to recall the Thalidomide situation of a generation ago in which the FDA was widely praised because of its caution that we did not have the problem in America that Europe did, and now we are hearing a countervailing point of view, and I am not denigrating its accuracy.

We have been so cautious and so restrictive. The periods are so protracted that we are not doing what we ought to be doing in terms of responsibly experimenting with some of the new drug technologies.

Could you evaluate that process for us?

Dr. WYNGAARDEN. When President Bush was serving as Vice President, he headed a panel on regulatory relief, and took a great interest in the process of drug approval in the FDA. He stimulated Commissioner Young to look very carefully at that process. During the time that Frank Young has been in that position, the average

time for release of a drug has been reduced from ten to about eight years.

It can probably be reduced further. We have, as your question clearly indicates, placed a very heavy emphasis in this country on the dual evaluation of drugs from the standpoint of efficacy and safety, and this is a long process. In Europe drugs have been released somewhat earlier without as much prerelease information on efficacy and certainly not on safety. They have placed somewhat greater emphasis than we have on post-market surveillance.

The difference is that in this country 2 percent of drugs that are actually marketed are eventually recalled. In Europe I am told the figure is closer to 25 percent because of post-marketing toxicity.

I think we are moving somewhat more toward the European system, but as we release certain drugs at an earlier stage than we would have done in the past, it is also incumbent on us to strengthen post-marketing surveillance so that we can follow the effects of having done so.

The issue is clearly joined primarily in two areas, the AIDS epidemic and new cancer drugs.

Senator BRYAN. Are you satisfied yourself that we have struck that balance? I understand the two differing philosophies that you have outlined here. Do you think we have hit the balance between those two at about the right point?

Dr. WYNGAARDEN. I think so. It has been a subject of a great deal of discussion in which the NIH has contributed, particularly Dr. Fauci and Dr. Broder for the Cancer Institute with the FDA. There is, I think, widespread agreement that we should go forward with the selective, careful, early release of drugs in certain situations, those being life-threatening situations in which we have no effective alternative therapy.

Senator BRYAN. Certainly AIDS would be in that category.

Dr. WYNGAARDEN. AIDS qualifies, yes.

Senator BRYAN. And, again, just to put it into perspective for us, if you will, with all of the money that is being spent federally and at the state level and through various research centers and universities is our approach to addressing an ultimate solution for AIDS whether it be a vaccine or some other type of medical breakthrough, are the pieces in place? Is the research strategy or are our efforts being well directed and coordinated or are we doing some things that are counterproductive. Can we be more effective?

Again, your own observations.

Dr. WYNGAARDEN. All of these questions are ones that are asked and then frequently revisited, and minor adjustments in the emphases in the programs take place. There is, for example, every other week a meeting in the Assistant Secretary of Health's office in which all the components of the Public Health Service participate and in which these issues are continually reviewed.

I do think that we have a comprehensive program that is going forward as rapidly as resources permit and as ideas are generated, and that in collaboration with other scientists in other countries the effort being directed towards the AIDS epidemic is really unprecedented. I do not know of any really good lead that is not being pursued.

Senator BRYAN. So, basically you think that our approach is sound and the strategy is good?

Dr. WYNGAARDEN. I do, yes.

Senator BRYAN. Let me now again drift into another area. Doctor, I received some calls yesterday from people that are involved in animal rights issues who have raised some questions about your activities in your former position at NIH, and let me at the outset make a disclaimer.

I do not endorse those allegations as being factually correct, but I do want to give you an opportunity to respond to the particular the issue which I am sure is not new to you which is the deaths of monkeys in Silver Springs.

Now, that may not be the most critical area of your involvement in your former position, but the allegations in effect are that the monkeys were subjected to cruelties that were beyond any reasonable justification. That there had been a series of commitments that the monkeys would be released to those who wanted to take care of them and then that those commitments were then breached. A series of those kinds of incidents are alleged, and I underscore and italicize the word alleged.

I am not making that allegation, Doctor. Your view?

Dr. WYNGAARDEN. Yes, I would be happy to comment on that. The incident that initiated this long series of events took place before I actually arrived at the NIH, and when I arrived in early 1982, that was one of the problems on the agenda.

I would point out that the scientist who had conducted these studies was approaching a critical health problem of interest to a very large number of Americans, and that has to do with the potential regenerative capacity of a damaged spinal cord. The studies that he had initiated were evaluating the behavioral and neurological recuperative powers of monkeys that had been surgically operated on to transact certain spinal cord roots.

The studies were intended to be relatively short-term studies. No one involved in that early protocol ever envisioned that these animals would be here eight years later in the condition that they presently are.

The NIH was brought into this in a couple of ways. The NIH had funded the research. It is a long-term policy of the Public Health Service that the NIH funds the research, but does not own anything purchased with the funds that are awarded to a grantee institution. Those purchases become the property of that institution.

Therefore, we have held from the beginning that the NIH does not own these animals. We did assume custody of them briefly at the request of the court, and after that we have played a role in trying to resolve this issue, but it is fundamentally not one in which we can unilaterally make such decisions.

Now, we have been accused time and time again of having gone back on our word, and I can assure you, Senator, I do not know of a single instance in which we have gone back on any promise concerning those Silver Spring monkeys.

The animals have been repeatedly examined by veterinarians of different groups. There is a feeling among the veterinarians that several of these monkeys may be experiencing phantom limb pain.

They are deteriorating. They have had extensive degenerative changes of the spine which make them very fragile.

We do not think that these monkeys could easily be returned to any other kind of environment. There never was any promise that we would turn them over to any other group. We have looked into such possibilities, but we have not gone back on our word in that respect or any other.

Senator BRYAN. If indeed as you have indicated—and I do not to prolong this, Mr. Chairman, if indeed you did not own the monkeys, that these were grantee institutions or research facilities, would you indeed have the ability to make a commitment as to the disposition of the monkeys?

Dr. WYNGAARDEN. Not unilaterally. We would very likely be challenged in court.

Senator BRYAN. These were not the Institute's monkeys to put it in a proprietary sense?

Dr. WYNGAARDEN. That is correct.

Senator BRYAN. If there are further questions from interested parties I would simply request, Mr. Chairman, that I be given an opportunity to look into them. There has been a concern raised, and I did want to give you the opportunity, Doctor, today to comment.

Dr. WYNGAARDEN. We would be happy to provide you any information you would like or I could arrange for people from the NIH who are in daily contact with this issue to brief your staff or anyone else you might wish.

Senator BRYAN. I appreciate that. Thank you, Doctor, and thank you very much, Mr. Chairman.

Senator GORE. Thank you, Senator Bryan.

Well, Dr. Wyngaarden and Dr. Ratchford, because of Dr. Bromley's scheduling constraints, we did not get to formal presentation of your opening statements.

I want to acknowledge the presence, Dr. Ratchford, of your daughter Ellen and her grandmother, Mrs. Champion. Let me ask a few questions on some other policy areas and then we will wrap this up fairly quickly. I wanted to thank you for your patience through the hearing today. First of all, Dr. Wyngaarden, you mentioned a retreat that you are going to be having on biotechnology?

Dr. WYNGAARDEN. I mentioned that I discussed with Dr. Moore the recommendation that I actually made, that after three, three and a half years of activity of the Biotechnology Science Coordinating Committee that it would be a good idea to take stock of where we are, and that one way of doing this would be to have an open meeting, or a retreat, however it might be scheduled, in which the members of the BSCC, and I would assume of my office, should I be confirmed, would participate with members of the biotechnology community and the private sector community, members of industry and members of, perhaps, state biotechnology offices and members of the research community.

Senator GORE. That is the same list that you gave when you first mentioned this. Is there anybody else that you can think of who might have an interest in that retreat?

Dr. WYNGAARDEN. I should think the environmentalists would.

Senator GORE. I wondered. I wondered, because they were omitted from your first two listings and omitted from the prepared answers to Committee questions, and have been omitted all along by the administration, and I welcome your fresh sensitivity because public interest groups and environmentalists should not be excluded from discussions that are designed to arrive at a consensus and resolve troubling questions on this subject. I take it you agree with that?

Dr. WYNGAARDEN. I do indeed, senator.

Senator GORE. That is very good. What will be your division's relationship to the BSCC? Will you actually participate in those meetings?

Dr. WYNGAARDEN. The BSCC will also be reviewed as to composition and membership. The charter calls for the OSTP to provide an executive secretary for the group, which we will do.

The BSCC is a coordinating committee, and a committee that is charged with evaluating problems in biotechnology from a scientific point of view and making recommendations to FCCSET, which is its parent body. It would logically do that through my office and through Dr. Bromley's office, who is Chairman of FCCSET. We will also involve the advisory committee, the President's Committee of Advisors on Science and Technology, the so-called PCAST.

Dr. Bromley has discussed with us the possibility of having a biotechnology subcommittee of that group which would provide additional public input.

Senator GORE. Well, we will follow that with interest. You know my view, that the BSCC's record, which is so frequently defended, is not a good one in my opinion. I think it has failed, essentially, and needs to be reworked.

Both industry, especially the small biotechnology companies, and the public are being harmed by continuing regulatory muddle. I hope that it can be straightened out. I believe that if it cannot be straightened out, then statutory provisions will be required and I for one will attempt to put them in place.

I also want to underscore my view that public participation is essential to the future success of biotechnology, and I was disappointed in Dr. Bromley's expressed view in response to written questions from the Committee that the public should be left out in the sense that BSCC meetings ought to be completely secret, with no minutes kept, and no public participation. I think that is wrong and I urge Dr. Bromley to reconsider that.

In private conversations I have had with you, I detected some indication that you are open to the view that there should be more public participation and awareness of what goes on within the BSCC.

I think that the failure to have EPA's proposed biotechnology regulations even published in the Federal Register is one of the clearest examples of the BSCC's shortcomings. This should have been done by the end of 1986, and here we are at the end of 1989 and it still has not been done.

I hope that you will provide for the record, and I here request you to provide for the record, a detailed review of what happened during the BSCC's review of the EPA's proposed TOSCA biotech-

nology rule. We had a private discussion about this and you know of my concern about it and I remain concerned about it.

[The following information was subsequently received for the record:]

In the spring of 1988, Dr. John Moore, Assistant Administrator for Pesticides and Toxic Substances, Environmental Protection Agency, a member of the Biotechnology Science Coordinating Committee (BSCC), informed the BSCC that the proposed rule for regulating certain microbial products of biotechnology under the Toxic Substances Control Act (TSCA) was in late draft form and would soon be ready for a submission to OMB for clearance. Dr. Moore discussed the general features and scope of the proposed rule, including the fact that the rule would subject microorganisms to premanufacturing notification and significant new use rule requirements unless specifically exempted. Also, that regulation of research would be based on intent to commercialize, and that EPA was proposing the establishment of environmental biosafety committees in user institutions with substantial delegated authorities for approval and exemption. The BSCC requested the opportunity to review and comment on the proposed rule. Dr. Moore agreed to send copies to the BSCC at the same time that a copy was forwarded to OMB.

BSCC members received copies of the proposed rule on about May 13, 1988. During the next week, the BSCC members reviewed the proposed rule from the standpoint of its scientific base and potential effects upon research and technology. The members quickly realized that the issues presented by the proposed rule were highly technical and very complex, and that time would be needed to have the 220-page document reviewed in detail by various agency staff. We felt that a proposed rule with such portentous economic, competitive, and scientific implications warranted careful consideration by the BSCC.

Accordingly, on May 23, I wrote Mr. James B. MacRae, Acting Administrator for Information and Regulatory Affairs, Office of Management and Budget, on behalf of the Biotechnology Science Coordinating Committee, requesting that OMB withhold clearance of the proposed rule until members had had an opportunity to review it. Reviews conducted by the National Science Foundation, the Department of Agriculture, the Food and Drug Administration, and the National Institutes of Health led to major reservations about the proposed rule. Agency representatives concluded that the rule did not use scientifically determined likelihood of risk as the basis for categories of regulated microorganisms and was thus inconsistent with the philosophy of the Coordinated Framework for Regulation of Biotechnology (June 26, 1986, Federal Register), of which the EPA was a signatory. Without a risk basis, the proposed rule portrayed a greater degree of inherent risk in these microbial products than scientific evidence supported.

Agency representatives engaged in extensive dialogues with EPA concerning legal, scientific and regulatory concerns, but were unable to resolve differences.

Accordingly, on August 19, 1988, I wrote Mr. Jay Plager, now the Administrator for Information and Regulatory Affairs, OMB, conveying the conclusions of the BSCC representatives of the four agencies or departments mentioned above, also pointing out that further attempts at resolution of the scientific issues had been discontinued at the request of EPA.

In this review, the BSCC strictly adhered to its advisory role and made no recommendation to OMB on the agency proposal. On August 30, I received an acknowledgement of my letter from Mr. Plager.

In mid-fall 1988, the BSCC was asked by Mr. Plager to review the EPA proposed rule on microbial pesticides under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), and also the revised EPA draft biotechnology rule under the Toxic Substances Control Act (TSCA). On behalf of the BSCC, I replied to Mr. Plager on January 19, 1989, that most of the same reservations concerning the earlier draft of the TSCA proposed rule remained, namely, that we considered that rule still not based on likelihood of risk, that both rules contained scientifically weak definitions, and that in the case of the TSCA rule the focus remained on the process by which the product was manufactured rather than on the product itself. We pointed out that this philosophy ran counter to the Coordinated Framework for Regulation of Biotechnology and the recommendations of the National Academy of Sciences.

Further, the revised TSCA rule did not address our original objections to the use of "commercial intent" as a factor for regulation of research. The non-EPA members of the BSCC concluded that the inclusion of laboratory research under the EPA definition of manufacture could create unnecessary barriers to innovative basic research, and that this could affect the competitive position of the nation in biotechnology.

In addition, the letter pointed out that the BSCC had requested the National Research Council to develop recommendations for risk-based classification schemes for plants and microorganisms to be released into the environment. The NRC report has now been published and proposes a framework for a scientifically based approach to such regulatory schemes.

Senator GORE. As I understand it—there was a draft letter signing off on the EPA's proposed rulemaking, but then the draft was changed over the weekend and a tough letter disapproving the EPA's regulations was actually sent.

Now, as I understood your earlier response to my questions on this matter, you indicated that you had not seen the draft or that it had been prepared by your staff without your approval. Is that correct?

Dr. WYNGAARDEN. There was one such letter that you showed me that fell in that category, but I would add that it was not really the function of the BSCC to approve or disapprove the EPA's proposal, but rather to evaluate them from a scientific point of view, which we did. We had concerns about the draft which indicated to us that the regulatory basis was directed toward the process rather than the risk of the organisms that might be tested. We relayed those impressions and conclusions of the committee to the OSTP and through them to OMB at their request.

Senator GORE. I am going to ask the Committee staff to give you a copy of the letter that I am referring to. This is the draft that was prepared on August 12, 1988, in which, according to the draft letter for your signature, you would have said "I feel that the BSCC has now had the opportunity we requested to consider the scientific basis of the proposed rule," and essentially signs off on it.

You did not sign this letter, but it is my understanding after checking that this was a result of an all-day discussion among all the participants in a meeting that you personally attended. That following that meeting the participants from EPA at least felt that this was going to be the BSCC's action and that you had signed off on it, and then they were quite surprised to find that a few days later another letter—or, the following Monday this draft was recirculated to EPA and to the other participants in the meeting and then they were surprised to find later that, without consultation, the position of the BSCC was changed. Do you know how that happened?

Dr. WYNGAARDEN. No. I do not have the clearest memory of all of that. I would comment on a few points. The statement of an all-day meeting must surely be incorrect. We never, in our existence, had an all-day meeting.

Senator GORE. A couple of hours meeting.

Dr. WYNGAARDEN. A couple of hours would be more like it.

Senator GORE. Now, let me contrast to the draft there, the final letter that you sent out said, "Further attempts at resolution of these scientific issues appear unlikely to produce consensus," and then you strongly criticized the proposed rules.

Now, without objection I will include the draft letter and the final letter in the record, along with a letter dated September 2 to you from John Moore, acting Deputy Administrator of the EPA, and this, let me note, is a different John Moore from the one that is now going to be in charge of the process. I mean, that is known to everybody involved here, but the record needs to reflect that as well.

[The letters referred to follow:]

Mr. Jay Flager
 Administrator for
 Information and Regulatory Affairs
 Office of Management and Budget
 Old Executive Office Building
 Washington, D. C. 20503

Dear Mr. Flager:

This letter is a follow-up to my letter of May 23, 1988. The NSCC has completed a scientific review of the EPA proposed rulemaking to regulate products of biotechnology under the Toxic Substances Control Act.

The NSCC members considered a number of scientific issues and engaged in substantial discussion. In response, EPA modified the wording of its proposal in a number of places. Nevertheless, we were unable to resolve *several* several issues. The following took on the greatest importance:

1. Are the categories of microorganisms to be regulated clearly defined scientifically?

The NSCC is supportive of EPA's proposed regulation of the category of intergeneric microorganisms that was originally proposed in the Coordinated Framework for the Regulation of

Biotechnology. However, ^{several} NRC members expressed concern that the proposed rules for regulation of all other microorganisms are not based upon scientifically determined likelihood of risk.

2. Will R&D and small-scale field testing be inhibited?

The NRC is ^{in general} supportive of the EPA approach for streamlining the review of small-scale field testing. However, ^{several} NRC members expressed concerns regarding: (a) the desirability of, and need for, EPA prescribed and approved Environmental Biosafety Committee; (b) a possible inhibitory effect on R&D, particularly from the "intent based" view of academic and other non-commercial research; and (c) the extensive data requirements for all EPA reviews. Thus, ^{several} NRC members are concerned that the proposed rules have the potential to restrict unnecessarily both basic research and the commercialization of biotechnology to the disadvantage of the country. ✓

Although it would be desirable to resolve these important, science-related issues prior to proceeding further, I feel that the NRC has now had the opportunity we requested to consider the scientific basis of the proposed rule, and inasmuch as the NRC has strictly an advisory role and makes no decisions on when and how any particular agency proposal should proceed, I am reporting the results of our discussion and our unresolved concerns to you. ✓

It is my understanding EPA will ^{request} public comment on these issues.

Please let me know whether the NCC can be of further assistance.

Yours truly,

James H. Wyngarden, M.D.

Chairman,

Biotechnology Science

Coordinating Committee

cc: NCC members

Enclosures ?



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

August 19, 1988

National Institutes of Health
Bethesda, Maryland 20892
Building :
Room :
(301) 495-

Mr. Jay Flager
Administrator for
Information and Regulatory Affairs
Office of Management and Budget
Old Executive Office Building
Washington, D.C. 20503

Dear Mr. Flager:

This letter is a follow-up to my letter of May 23, 1988. The Biotechnology Science Coordinating Committee (BSCC) has completed a scientific review of the EPA Draft Version of Proposed Rules for Regulating Certain Microbial Products of Biotechnology under the Toxic Substances Control Act (TSCA).

After BSCC members individually conveyed to EPA a large number of specific concerns and held extensive discussions, fundamental scientific concerns regarding the proposed rules remained. Further attempts at resolution of these scientific issues appear unlikely to produce consensus. The proposed rules do not use scientifically determined likelihood of risk bases for categories of regulated microorganisms as proposed in the Coordinated Framework for Regulation of Biotechnology (June 26, 1986 Federal Register). Without a risk basis, the proposed rules portray a greater degree of inherent risk in these microbial products than scientific evidence supports. The proposed rules now include, for example, inter-generic organisms formed by noncoding regulatory regions and other organisms scientifically considered to be of low risk.

The proposed regulation of field research seeks to establish a far more complicated scheme for regulation of research than is necessary or desirable. The potential for negative effects on the application of molecular biology to a variety of health and environmental applications could seriously diminish the research base on which scientific advances and industrial competitiveness ultimately depend. This is inconsistent with the Administration's position of encouraging commercialization of basic research.

SENT BY: NIN Exec Secretariat : 8-23-88 : 4:18PM :

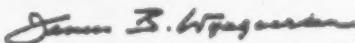
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Most members of the BSCC believe that the approach used by EPA in the Coordinated Framework for defining categories of microorganisms with potential risk is scientifically more justified than its new approach, which would subject all microorganisms to PMN (premanufacturing notification) and SNUR (significant new use rule) requirements unless explicitly exempted. The proposed EPA rules are inconsistent with the conceptual basis of the Coordinated Framework. The Framework established the groundwork for achieving a delicate balance between ensuring that new products do not pose an unreasonable risk to health and environment while not impeding U.S. innovation by introducing unnecessary restrictions.

Sincerely,



James B. Wyngaarden, M.D.
Chairman
Biotechnology Science Coordinating
Committee, FCCSW



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

SEP - 2 1988

OFFICE OF
THE ADMINISTRATOR

Dr. James Wyngaarden
Director
National Institute of Health
9000 Rockville Pike
Bethesda, Maryland, 20014

Dear Dr. Wyngaarden:

I want to convey my strong objection and dismay over the process whereby the letter which purports to reflect the BSCC views on the EPA proposed TSCA Biotechnology rule was formulated and transmitted.

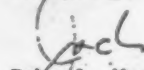
As you well know you convened the BSCC on Friday, August 12, whose sole agenda was to discuss transmittal of the BSCC review to the Office of Management and Budget (OMB). The 5 members in attendance discussed the issue and spent considerable time reviewing and commenting on a draft transmittal letter which you provided. The meeting concluded with a general agreement as to modification of the draft letter which you would edit over the weekend, circulate to members on Monday for a final review and that you would sign and transmit as Chairman on Tuesday: I know that at least 4 members' offices approved your Monday redraft, essentially as written.

I was, therefore, astounded when a copy of the signed and transmitted letter was received that bore little resemblance to the draft review developed at the August 12 meeting and circulated by you on Monday, August 16. At a minimum I and possibly others were misled at what I can charitably term as a gross breach of traditional committee practice. If the approved draft of August 12 was to be radically changed, why was there no review?

My trust in the BSCC has dangerously eroded. Further, it is my opinion that this is but a symptom of serious discord amongst the committee, perhaps due to conflicting roles, flawed participation, and lack of clearly defined procedures. These concerns must be dealt with if the broad goals of a group such as the BSCC are to be realized.

Under current circumstances, I cannot in good conscience participate in BSCC activities including discussions of the FIFRA Biotechnology Proposed Rule. In this regard I refer you to the concluding paragraph of my August 30 letter to Jay Plager which is enclosed.

Sincerely,



John A. Moore
Acting Deputy Administrator

Enclosure

Process by Which Proposed Rule Was Developed

<u>Date</u>	<u>Event</u>
12/31/84	Federal Register proposing Coordinated Framework announces interpretation that microorganisms are subject to TSCA
6/26/86	Federal Register describing "Coordinated Framework" states role of TSCA in Framework, announces EPA policy regarding microorganisms under TSCA
6/86 through 1/88	Writing of draft proposed rule: - EPA workgroup evaluates issues - EPA Biotechnology Science Advisory Committee (BSAC) offers advice *
4/15/88	Red border begins
4/29/88	Red Border ends
5/10/88	Draft NPRM sent to Office of Management and Budget (OMB)
5/13/88	Draft NPRM brought to Biotechnology Science Coordinating Committee (BSCC)
5/88	Draft proposed rule leaked to industry/press; ABC states they've met with Boyden-Gray
4/88 through 9/88	Series of meetings with BSCC/BSCC member agencies OMB staff (See attached chronology)

- * 12/11-12/86 - Subcommittee on Definition of Release to Environment
 2/26-27/87 - Subcommittee on Definition of Pathogen
 3/20/87 - Subcommittee on Greenhouse Containment Guidelines
 4/27/87 - BSAC
 7/16/87 - Consultant Drafting Session to develop language describing microorganisms of concern
 7/16/87 - BSAC
 1/5/88 - BSAC
 12/21/88 - Subcommittee on Proposed Rule
 1/12/89 - BSAC

<u>Date</u>	<u>Event</u>
7/29/88	Memorandum from Moore to Fraas (OMB) indicating additional language will be added to preamble to address BSCC concerns
9/19/88	Letter from BSCC to OMB concerning proposed rule
8/30/88	Meeting between Plager and Moore
9/23/88	Revised version NPRM sent to OMB
9/88	OMB sends revised NPRM to BSCC
9/88 through present	BSCC reviews revised NPRM
12/6/88	Version reflecting editorial cleanup based on OMB staff comments sent to OMB
12/21/88	Meeting of BSAC Subcommittee on TSCA Proposed Rule
1/12/89	Meeting of BSAC; Subcommittee review discussed
1/89	Discussions with OMB on possibility of issuing ANPRM
2/15/89	Request for comment on regulatory approach published in FR (54 FR 7027)

CHRONOLOGY OF MEETINGS* - TSCA

<u>Date</u>	<u>Meeting</u>
4/28/88	Briefing; USDA Staff
4/29/88	Meeting; OMB Staff
4/29/88	Briefing; NIH, NSF Staff
5/2/88	Briefing; FDA Staff
5/5/88	Meeting; BSCC
5/27/88	Meeting; BSCC
6/6/88	Meeting; USDA/APHIS Staff
6/7/88	Meeting; NSF Staff
6/8/88	Meeting; OMB Staff
6/9/88	Briefing; Department of State
6/10/88	Meeting; FDA Staff
6/28/88	Briefing; Members Committee on Life Sciences (CLS)
7/7/88	Meeting; BSCC
7/8/88	Briefing; Member of the Council of Economic Advisors (Dr. Tom Moore)
7/11/88	Meeting; International Biotechnology Subcommittee (IBS) of the CLS
7/21/88	Meeting; BSCC
7/22/88	Meeting; BSCC
8/4/83	Meeting; IBS of the CLS
8/12/88	Meeting; BSCC
8/24/88	Briefing; Small Business Administration (SBA)
8/30/88	Meeting; Moore/Plager
9/21/88	Conference Call; OMB Staff

* Proposed TSCA Rule sent to OMB on 5/10/88.

10/14/88 Meeting; OMB Staff
10/24/88 Conference Call; OMB Staff
12/16/88 Meeting; SBA
12/21/88 Meeting; BSAC Subcommittee on Proposed Biotechnology Rule Under TSCA

Senator GORE. That is a pretty serious set of charges, I would say. If the BSCC is to be reworked and made to function properly, the Environmental Protection Agency needs to have some confidence that it will work fairly and with due process. Do you wish to comment on this letter?

Dr. WYNGAARDEN. I think that that letter indicates that by that time we had reached an impasse and that in spite of the comments of various members of the BSCC and advice to EPA, or at least requests to EPA, to consider the comments, we did not think they had been responsive. Our comments dealt primarily with the scope of their proposed regulations which would bring many microorganisms, in particular, under their purview that had formerly been exempted. We also thought their regulations went far beyond the scientific basis available at that time. These were based on process, implicitly regarding anything produced by recombinant DNA techniques as inherently dangerous when the scientists in this field did not agree with that.

We had been led to believe that EPA was reworking the drafts to take into account some of the comments of the BSCC. But when we saw them they really had not changed that much. We had reached an impasse that was not likely to be resolved by additional discussion of the group.

Senator GORE. Let me say, Dr. Wyngaarden, that in spite of these criticisms which I view as serious, I personally have confidence in you, but I feel that your handling of the BSCC has been such that really extraordinary efforts are required to reestablish confidence in the process and to restore the trust and integrity necessary for the BSCC to perform an effective role in interagency coordination. That openness and public participation needs to be viewed in light of the need to reestablish trust in the BSCC process.

Dr. WYNGAARDEN. I would just add that Jack Moore himself did not come very often after that. The EPA was generally represented by Dr. Elizabeth Malewski. With the change of administration and Dr. Moore's departure, his replacement is taking a very active role in the BSCC. I think it is back on a much more collegial basis than it was toward the end of the last administration.

Senator GORE. I asked Dr. Bromley how to restore trust and integrity in the BSCC, and his response emphasized the need for secrecy. I was not reassured by that, and I hope that you all will make progress there.

Now let me say that the bells have unexpectedly rung early for a vote. I have additional questions in writing on a number of subjects, including how we plan, Dr. Ratchford, to deal with the enormous amount of data coming out of the Mission to Planet Earth Program which I want to highlight that for your attention and how we plan to deal with the LANDSAT VII funding and how we plan to deal with the superconductivity initiative.

I would note that I am extremely disturbed that DOD is intended now to be the lead agency when our real threat is economic and commercial on the human genome project, on drug addiction research, science, education and a number of other policies.

I want to underscore that we are going to be looking at the written responses to these questions very, very closely, and when you and your two colleagues are confirmed we will have a later hearing

where all four of you come back with Dr. Bromley. Because of the vote we will have to adjourn earlier than anticipated.

You have our thanks for your participation here, and we look forward to your confirmation. Thank you.

[Whereupon, at 12:20 p.m. the hearing was adjourned.]

[The following information was subsequently received for the record:]

JAMES B. WYNGAARDEN

POSTHEARING QUESTIONS FROM SENATOR GORE AND THE ANSWERS

1. Drug Addiction. In the Committee's prehearing questions to you, we raised the question of whether the President is currently spending enough on research for medical ways to end drug dependency. Your response pointed out that the National Institute of Drug Abuse has a budget of \$240 million for drug abuse research.
 - How large an effort is the Institute making to find medical treatments for drug addiction, including addiction to such substances as crack cocaine? Is the government in fact looking seriously for ways to help people kick the cocaine habit?
 - When, in your judgment, will these efforts succeed? Can we expect medical treatments soon which will help recovered addicts stay free of drugs?

ANSWER: A. The National Institute on Drug Abuse (NIDA) is part of the Alcohol, Drug Abuse and Mental Health Administration (ADAMHA). The Administrator of ADAMHA, Dr. Goodwin, has designated the development of new medications for the treatment of brain and behavior disorders as one of his top priorities. The initial focus of this program is on the drug problem with a particular emphasis on both cocaine and heroin addiction. Recent advances in our understanding of the fundamental brain mechanisms underlying drug addiction have created the potential for significant advances in the treatment of this disease. Last year, NIDA created a Medications Development Program with special funds appropriated by the Congress. The program, which is based on a collaborative effort involving the Federal, academic, and private sectors, is fully operational; over twenty different treatment compounds are being investigated and six clinical trials are underway. Similar medications development efforts at the NIH involving cancer, AIDS, and epilepsy have been notably successful. NIDA has been working closely with several Institutes at the NIH in the development and implementation of their program. Interagency Agreements will be developed within the year between NIH and ADAMHA to formalize this collaboration to ensure that new medications for the treatment of heroin and cocaine addiction are developed as rapidly as possible.

B. The development of new medications is a long and difficult procedure which requires the demonstration that a new treatment is both safe and effective. Historically, this process has taken from seven to eleven years. Recent efforts by the scientific community and the FDA appear to have shortened the time somewhat. This type of development activity is, however, high risk, and predicting success is very difficult. Dr. Goodwin believes, however, that certain medications show great promise and that,

optimistically, some of these new treatments could be formally approved by the FDA in as little as three years. In an effort to shorten this period, I understand that he will work, as NIH and ADAMHA have in the AIDS area, with the FDA to obtain a treatment IND for new, effective therapies prior to approval. This will greatly speed up patient access to new treatment.

I would note that NIDA and Dupont jointly developed a medication called naltrexone that blocks the effects of heroin and prevents readdiction. The medication may also be useful for some forms of cocaine addiction. It was approved for use in the U.S. in 1985. There has been a specific problem with patient compliance in taking this medication. NIDA is attempting to develop a long-acting preparation of this treatment agent to address this issue.

2. Human Genome Project. I am personally a strong supporter of the human genome project; I believe that it would be a Rosetta Stone that would unlock the secrets of many debilitating genetic diseases. However, it is a complicated interagency effort.

- If confirmed, do you intent to take a personal role, with Dr. Bromley, in supervising this program? Since it is an interagency effort, who is the Administration will be the overall supervisor and coordinator for the effort?

ANSWER: Mr. Chairman, I assure you I will follow the progress of the human genome project with great personal interest. As you know, I made it a high priority new initiative during my tenure at NIH, sought funds for the project, established the Office of Human Genome Research in the Office of the Director, recruited Dr. James Watson to head the Office, and recommended to Secretary Sullivan the elevation of the Office to Center status, which it now has. My background in medical genetics gives me particularly keen appreciation of its potential. I am very pleased with the cooperation occurring between NIH and DOE so far. About a year ago the two entities signed a memorandum of understanding. Under Dr. Watson's leadership this cooperation has blossomed further, and I am confident that it will continue. In addition, Dr. Watson and his staff, and the DOE officials responsible for their participation in the program, are in contact with other agencies with interest in complex genome research, such as the Department of Agriculture, and the National Science Foundation. I am confident that the effective and congenial collaboration that has marked the early stages of this project will continue. Since it is an interagency effort, the Office of Science and Technology Policy has the responsibility to ensure that the various agencies and components of the program are effectively coordinated. The primary responsibility for such coordination rests with the Associate Director for the Life Sciences, under Dr. Bromley's leadership.

3. **Animal Research.** As you well know, one of the most controversial issues in life sciences is animal experimentation. While we in Congress appreciate the contributions that animal research makes to the treatment and cure of disease, many Americans are upset by what appears to be the unnecessary suffering of laboratory animals. As was discussed at the hearing, cases such as the Silver Spring monkeys have raised concerns.

- In your view, what can and should OSTP executives and other Federal officials do to ensure that researchers receiving taxpayer support treat their laboratory animals well?

ANSWER: Both the executive and legislative branches of government during the previous and current Administrations have affirmed their commitment to appropriate and humane treatment of animals in scientifically valuable research. Federal requirements in this area are firmly established in the Public Health Service Policy on Humane Care and Use of Laboratory Animals and the Department of Agriculture's Animal Welfare Regulations. The Public Health Service Policy was revised in 1985 as a result of the 1985 Health Research Extension Act. The revised policy was heavily based on a report entitled, "U.S. Government Principles for the Utilization and Care of Vertebrate Animals Used in Testing, Research, and Training," published in the Federal Register Vol. 50, #97, May 20, 1985, by the OSTP. The PHS policy was slightly revised in 1986.

Long before 1985 the National Institutes of Health had made humane treatment of laboratory animals a high priority. This is reflected in the early and continuing NIH endorsement of the National Research Council's Guide for the Care and Use of Laboratory Animals and the requirement that its grantees abide by the provisions of that Guide as a condition for receiving Federal funds. Thus, Federal rules are in place and well known by most researchers who have assumed the heavy responsibilities inherent in the use of animals in their research. Federal agencies responsible for compliance report that researchers find these rules practical, institutions find them to be effective, and, perhaps most important, all find the rules to be of considerable benefit to research animals.

The Department of Agriculture has now published in final form Parts I and II of their revised Animal Welfare Regulations, as required by the Animal Welfare Act of 1985. Parts I and II are now reconciled with Public Health Service policies wherever possible through negotiations between HHS, USDA, and OMB. Part III has been republished as a proposed rule. The Public Health Service is working with USDA to reconcile Part III with existing PHS policies. Part III as proposed would be extremely expensive. It has attracted twenty thousand comments from the research and industrial community chiefly, and the comments are largely negative. I believe that the Office of Science and Technology Policy and other Federal officials can work with the Department

of HHS, USDA, and OMB in bringing the proposed USDA rule into harmony with existing PHS policies. I am committed, as I know Dr. Bromley is, to reinforcing the requirement for strict adherence to existing rules, and reaffirming the government's commitment to sound science and humane treatment of animals, which are, in fact, inseparable.

4. Science Error and Fraud. In your answers to the Committee's prehearing questions, you said the number of serious cases of scientific misconduct--of error or outright fraud in scientific papers--is small. But, of course, the possibility of error or fraud in biomedical research understandably upsets people. These problems could lead to erroneous or dangerous treatments. In an extreme case, people could die.

- What concrete steps do you believe should be taken to ensure that Federal research agencies, scientific journals, and the research community police themselves in order to prevent these problems? If confirmed, what mechanisms or supervision will you recommend?

ANSWER: I believe that primary responsibility for dealing with possible scientific misconduct is appropriately and necessarily placed in the applicant/awardee institution. I believe the funding agency has no less important responsibilities, but they are somewhat different from those of the institutions. Agencies must have policies in place that promote responsible approaches to the issue of scientific integrity. These include the description of standards and guidelines, the promotion of educational programs for young scientists on responsible and ethical practices in science, clear articulation of institutional requirements, monitoring the compliance of institutions with Federal requirements, establishment of mechanisms for the evaluation of reports of possible misconduct, the conduct of independent investigations when indicated, and the recommendation of sanctions when infractions warrant.

Since all Federal agencies that conduct or support scientific research share these responsibilities, I believe there is a significant role for the Office of Science and Technology Policy in promoting and coordinating efforts to foster the responsible conduct of research, and efforts to diminish the possibility of scientific misconduct. Equally, there is a significant leadership role for the Office in fostering broadly applicable policies for dealing effectively with instances of possible misconduct, however few they may be. A key function of OSTP is to monitor issues, policies, and programs that cut across Federal agencies that fund research. The Office needs to ensure that the several Federal agencies are appropriately attentive to this issue, and consistent in their approaches.

Several Federal research agencies have active programs and significant policies in place. As Director of the National Institutes of Health, I elevated and enlarged the existing office and established the Office of Scientific Integrity (OSI) in the Office of the Director, and supported the establishment of an Office of Scientific Integrity Review in the Public Health Service. Such an organizational strategy could serve as a model for other agencies and departments. The functions of the OSI at NIH include initiatives to reach out to significant sectors of the research community (journal editors, research training program directors, professional societies) to engage them in a cooperative approach to developing sound strategies for promoting scientific integrity. The policies also include comprehensive approaches to the definition, identification, and investigation of possible scientific misconduct. If confirmed as Associate Director for Life Sciences in OSTP, I would strongly support these ongoing efforts, and would review the policies and practices of the relevant agencies for consistency, effectiveness, and fairness.

POSTHEARING QUESTIONS FROM SENATOR GORE TO DR. RATCHFORD
October 27, 1989

QUESTION: I want to ask you further about science and mathematics education. Today, American elementary and high school students continue to perform poorly in science and mathematics. Their test scores and skills fall below not only those of students in other countries but also those of earlier generations of Americans. In your years at the American Association for the Advancement of Science, I know that you have thought about this problem a great deal.

- Given what you have learned over the years, what do you believe is the main cause of this problem? Does the problem lie in the schools, the parents, or elsewhere?

ANSWER: Your question is an extremely difficult one to answer with confidence. The fact that a large number of studies by distinguished panels have been performed over the last decade and more, aimed at answering this very question, proves if nothing else, that solutions are likely to be complex and are hard to identify and implement.

The problem we as a nation face in science and mathematics education has causes that fall into at least two main categories: inadequate motivation on the part of our students, and deficiencies in our schools' educational programs. Let me say a few words about each category.

In order for students to learn, they must be motivated to do so. Our culture, unfortunately, does not value science in ways that encourage most of our students to seek an adequate level of scientific literacy. The stereotypical view of the "mad scientist and nerdy engineer" that adults convey to youngsters does not encourage student interest in the sciences. And, certainly, interest in a subject is a prime factor in how well children will achieve in that subject.

By and large, adults are not as well informed about the increased value of science and mathematics skills in occupations and professions, other than in obvious ones such as science, medicine and engineering. Many parents, having seen little value of mathematics and science in their lives and having experienced modest achievement in these subjects (which they view as very difficult) do not have very high expectations for their children's achievement. Too often parents are willing to settle for less than excellent achievement because they believe that ability is more important than hard work; whereas, in fact, thoroughly completing homework, along with other intellectual exertion, accounts for most achievement in mathematics and science.

One of the least reported but most interesting results of international comparisons in mathematics and science achievement is the comparison of Japanese and American mothers' attitudes about their children's mathematics performance. Japanese mothers rated ability noticeably below effort as factors in their children's mathematics achievement, whereas, American mothers rated ability almost as highly as effort.

It may be that because Americans believe it takes a special talent to be able to learn science and mathematics, that Americans more readily accept less than excellent performance in these subjects. American children can achieve in mathematics and science and will succeed in their scientific studies if expected to do so.

Motivation of our students to want to learn mathematics and science thus depends on developing a higher value for science and mathematics in our culture (especially by the peers of our students); parents being convinced of the importance of an excellent mathematics and science education; and increased expectations for our students in these areas.

Motivation, however important it may be, is not enough. We have to be able to deliver good instruction as well. For the schools to do this, we need excellent teachers and excellent curricula. With respect to mathematics, mathematics curricula in the United States are characterized by a great deal of repetition and review and tend to be arithmetic-driven, particularly at the middle school level. The result is that we have students entering high school with very little grounding in mathematics, and very inadequate problem-solving skills. As for science, it is all too often taught as a book activity - memorizing facts - instead of as a hands-on exploration of the natural world. Science curricula suffer from excessive repetition of some topics in needless detail while some topics of great importance to scientific literacy are absent or reserved for only a few students.

In the AAAS (American Association for the Advancement of Science) Project 2061 document, Science for All Americans, science curricula are described as overstuffed and undernourished; in the report on the Second International Mathematics Study, U.S. mathematics curricula are described as underachieving. Thus, one factor contributing to poor achievement in mathematics and science is that our children's programs are based on inadequate curricula.

Getting larger numbers of excellent mathematics and science teachers into our schools is also of utmost importance. There is much work ahead of us here: first to attract highly-competent teachers to our schools in the first place. This means assigning a higher prestige to teaching by our culture and cutting down the red tape teachers face daily, to give just two examples. We must also provide excellent continuing education for our teachers, especially in science where the knowledge base is constantly in flux. This latter challenge is one that the National Science Foundation met following Sputnik, and it deserves our renewed attention today.

- What specific programs and actions will you recommend to Dr. Bromley and the President to help remedy this problem?

ANSWER: In my confirmation hearing on October 27, I responded to Senator Kerry's question on a related topic by noting three actions that I would pursue on behalf of OSTP in the short term, should I be confirmed. First, as requested by the Senate Appropriations Committee, OSTP would immediately look into issues regarding the coordination of mathematics, science and engineering education programs between the National Science Foundation and the Department of Education. This report is due March 1, 1990, and therefore will be preliminary in nature.

Second, a new committee would be established within the Federal Coordinating Council for Science, Engineering and Technology (FCCSET) to address problems of the nation in human resources -- especially in science and mathematics education. This new committee would coordinate, on a continuing basis, activities of all federal agencies with significant responsibilities in the area, including those with jurisdiction over education of scientists, mathematicians and engineers, as well as those with responsibilities for science literacy for the general student. It would also include those agencies that are major users of scientific and engineering personnel. In addition to coordination of existing programs, the FCCSET committee would be expected to address priorities in government programs and funding and, working with OSTP and OMB, attempt for the first time to develop a coherent federal budget for science and mathematics education.

Third, Dr. Bromley has announced his intention to appoint a panel of the President's Council of Advisors on Science and Technology (PCAST) to study and report on the federal role in science and mathematics education.

I cannot prejudge the outcome of these efforts over the months ahead. I should point out, however, that together they bring leaders from within the federal government as well as distinguished experts from outside government together to address actions that should be taken. It is this operational orientation of these efforts that give me confidence of tangible results that will permit OSTP to address effectively the federal role in mathematics and science education.

QUESTION: Budget priorities. If confirmed, you will assist Dr. Bromley on matters of policy and international affairs. The "policy" part of your job leads quickly to the question of budget priorities. President Reagan and President Bush have endorsed many research projects -- the Superconducting SuperCollider (SSC), the Space Station, the doubling of the National Science Foundation (NSF) budget, the Strategic Defense Initiative, the National Aerospace Plane, the human genome project, and others. There are also other pressing needs that the Administration has been slow to respond to, including the sharp decline in U.S. technological leadership and important environment-related projects such as the Mission to Planet Earth.

- In the midst of many needs and many possible projects, what research priorities would you recommend to Dr. Bromley and the President? In an era of tight budgets and growing problems, what do you believe should be the highest priorities?

ANSWER: Budget priorities, more than anything else, define the de facto science and technology policies of the United States. In order for OSTP to discharge effectively its responsibilities under PL 94-282, the National Science and Technology Policy, Organization and Priorities Act of 1976, it is crucial that the office be involved in consideration of the science, research and development budgets of the federal agencies at all levels of aggregation. As you know from Dr. Bromley and from answers that I provided to pre-hearing questions from Chairman Hollings, OSTP and OMB are working together at all levels to insure that priorities are set for federal science programs in a manner consistent with national needs. Should I be confirmed, I shall participate in this effort with enthusiasm.

As for what research priorities I would recommend to Dr. Bromley and the President, let me first discuss the process for setting R&D priorities within the Administration, as I understand them. As noted above, reviews of the science, research and development budgets by OSTP and OMB, at all levels, are currently under way. This review, in general, is based on budget proposals developed independently by the agencies.

One exception to this general rule is the budget proposal for research and development related to global climate change. Here the budget was developed by a number of agencies in an interactive manner through the Committee on Earth Science (CES) of the Federal Coordinating Council on Science, Engineering and Technology (FCCSET). This FCCSET committee's involvement in setting budget priorities is expected to be emulated in other areas, such as mathematics and science education - as noted in my answer to the previous question.

As for what should be our highest priorities in science, research and development, the answer is that we should have a carefully-constructed, balanced portfolio of programs and projects. One aspect of balance relates to individual, principal investigator - initiated projects and the megaprojects, such as those you cited in this question. As Dr. Bromley has stated, the high quality of American science and technology depends on continued, adequate funding of the individual principal investigator. The megaprojects must, in all cases, be balanced against this need.

International cooperation is important in all aspects of fundamental science, but it is especially important as far as the megaprojects are concerned. Should I be confirmed, one of my highest priorities will be to address, in a comprehensive manner, the issue of international cooperation in the megaprojects. This will include efforts to assure a wider participation by the nations of the world in a broad array of projects; apply a longer time scale in planning and siting these projects; develop equitable and realistic funding plans; and seek comprehensive high-level international agreements that would better assure the reliable participation of all countries involved.

QUESTION: The decline of American leadership in technology. In technology after technology, the United States is losing both technological leadership and market position to other countries. A May report by the Defense Department says that Japan leads the United States in microelectronic circuits, gallium arsenide, robotics, optics, superconductivity, and even biotechnology materials and processing. At the same time, U.S. firms continue to lose market share; in the last year alone, the United States has lost many of its companies which supply equipment and materials to the U.S. semiconductor industry. Other countries continue to invest heavily in industrial technology; the October 23 issue of Business Week estimates that European governments and companies will spend up to \$16 billion over the next six years in joint research projects. OSTP has written a report on one important sector, high-performance computing, but the President has made no overall technology proposals or even expressed concern about the eroding U.S. lead in technology.

- If confirmed, will you, as the principal Office of Science and Technology Policy (OSTP) official responsible for policy and international affairs, devote attention to the position of the United States in world science and technology? What will be your relationship with the proposed Associate Director for industrial technology?

ANSWER: Yes, if confirmed, I would expect to devote substantial attention to the position of the United States in world science and technology. I would anticipate that the Associate Director for Industrial Technology and I would work together, in a collegial manner on some international science and technology issues that relate to U.S. international economic competitiveness. Implementation of the U.S.-Japan cooperative science and technology agreement is one example of this overlap in responsibility.

- When will OSTP send to Congress the reports on superconductivity and the general technology base that have been discussed recently in the press?

ANSWER: The Superconductivity Five-Year Action Plan called for the Superconductivity and Competitiveness Act of 1988, is complete and presently undergoing final clearance. I understand this process is almost finished, and the report should be sent to Congress in the near future.

The general technology base report, as mandated by Congress, deals with the status of four key technologies (semiconductors, advanced manufacturing, optical technologies, and superconductivity). The Department of Commerce and OSTP are working closely together on its preparation. It is my understanding that it will be completed and sent to the Congress early in of the next session of Congress.

- Will Congress and the public see concrete proposals from the Administration regarding technology policy? Or does the Administration feel that the current situation is acceptable and that no technology initiatives are necessary?

ANSWER: Dr. Bromley has placed a very high priority on technology policy at the Office of Science and Technology Policy, as is evidenced by the President's intention to appoint an Associate Director for Industrial Technology. Should I be confirmed, I intend to work within OSTP, and with other agencies of the U.S. Government as appropriate, to assist with development of a technology policy to complement the Bush Administration's science policy. I understand that Dr. Bromley intends to make the broad outline and some details of such a technology policy available in the President's 1991 budget presentation. Further details, subject to additional refinement, will be released during the following year. The development of such a policy is being closely coordinated with the Department of Commerce, the Economic Policy Council, the U.S. Trade Representative, the Office of Management and Budget and the Department of Defense.

QUESTION: International cooperation on large research projects. President Bush is a major supporter of the SSC, the large atom-smasher that he proposes to build in Texas. I want to ask you about possible international cooperation on this project.

- Do you believe that the United States should seek international cost-sharing on this kind of large science project? In the case of the SSC, does the Administration have firm commitments from foreign governments to help pay the estimated \$6 billion cost of this project?

ANSWER: I believe it is entirely appropriate for the United States to seek international cost-sharing on a large project such as the SSC, in view of the magnitude of the project and the fact that it will be a unique facility available for research by scientists from all over the world. SSC is in a class of scientific facilities that is so large and expensive it should not be duplicated elsewhere; therefore, its use should be shared and so should some of its cost.

I am not familiar with the details of discussions related to international participation that have been undertaken to date, but I understand that an international plan is being prepared which will outline the Department of Energy's strategy for obtaining the necessary commitments. After the plan is complete and fully approved, a process that will include OSTP, the Department of State, and other concerned agencies, I understand the Department will move aggressively to approach a number of foreign governments. I am told the only firm commitment to date is a \$50 million in-kind contribution from India.

- Since both the Europeans and the Japanese have their own high-energy particle physics programs, they may be reluctant to contribute to the SuperCollider. That possibility raises this question: if costs rise, at what point would this project become too expensive for Americans to finance alone?

ANSWER: I understand the SSC budget request by the Administration indicated a need to seek one-third of the total project cost from non-Federal sources (state and foreign). Therefore, there is already an awareness of the budget limitations and the need to keep the cost down. I am not aware of the specific amount above which the project might be considered too expensive.

QUESTION: Universities and foreign companies. In your answers to our prehearing questions, you said that you would not like to see any limits on the ability to our universities to share basic scientific information. On the related issue of sharing technology, you said American companies should do more to take advantage of university inventions. I agree with both points, but I also want to pursue the issue of universities sharing taxpayer-developed technology with foreign firms.

- In your judgment, should American universities which receive substantial taxpayer funds for research actively seek to sell their new inventions to foreign companies or to enter into applied research projects with those foreign companies?

ANSWER: As you stated in the preamble of your question, we share a common conviction - along with most others involved with our universities - that there should be no limits on the ability of our universities to share basic scientific information. But what about U.S. universities that sell inventions to or undertake applied research projects with foreign companies? This is a tougher question.

First let me say a few words about the magnitude of foreign participation in U.S. university R&D. Two reports address this issue in some detail: a 1988 General Accounting Office (GAO) study, "Foreign Sponsorship of U.S. University Research," and the just-released National Science Board's "Report of the NSB Committee on Foreign Involvement in U.S. Universities."

The GAO surveyed 150 universities and found that 107 reported \$74 million in foreign support of research. About \$28 million of this came from business sources - about one-third of 1 percent of R&D expenditures at these universities. Quantitatively this is small effect.

There is little evidence to suggest that American universities actively seek to sell their new inventions to foreign companies. Only one university reported a permanent office in a foreign country to solicit funding; two others had plans for such offices. Only five universities had agreements with foreign organizations to solicit funding and/or negotiate licenses for university-developed technologies; six more have plans for such agreements.

The enactment of the Bayh-Dole Act in 1980 establishes a preference for domestic manufacturing and for small businesses that encourages cooperation between domestic industry and U.S. universities, that, if anything, makes licensing to foreign sources more difficult.

- Are American universities now becoming research laboratories for foreign firms and, if so, where do we draw the line between open cooperation and a concern about selling the nation's most important scientific and technological assets?

ANSWER: From the data cited above, and from further detail contained in the GAO and NSB reports, I believe that it is greatly overstating the situation to say that American universities are becoming research laboratories for foreign firms. In fact, major foreign companies have been excluded from participation in some NSF-sponsored University-Industry and Engineering Research Centers because of concerns by the universities that U.S. companies may discontinue participation if foreign companies join.

Because of a recognition that reciprocity is one aspect of any stable, long-term relationship, foreign firms involved with NSF centers are offering long-term visits to U.S. scientists and sponsoring seminars on research activities at their (foreign) laboratories.

This issue of loss of U.S. technology to other countries is also related to relative foreign student populations. According to the NSB report, in 1983 the United States had over 300,000 foreign students, while Japan had less than 10,000 students from other countries. We must take steps to encourage more American students, especially those in science and engineering, to study and perform research in countries with cutting-edge science and technology like Japan, France and West Germany.

In summary, I do not see a significant problem now with American universities becoming research laboratories for foreign firms. As I stated in my prehearing responses, I will support U.S. government efforts to increase cooperation between our own industry and universities, as well as encourage industry to actively seek out centers of excellence abroad. The overall situation does warrant careful scrutiny, however, and issues of reciprocity are of special importance in this regard. Should I be confirmed, I would expect to work with the federal agencies, universities, business, and this committee to preserve the U.S. national interests as well as to protect the principle of unfettered access to basic scientific information.

QUESTION: Scientific data. Let me ask you a general question about Federal policies on scientific data by using a specific example -- global change. U.S. satellites and weather stations collect huge amounts of data and will collect even more as we continue our efforts to monitor global warming and ozone depletion. This great increase raises the question of how the government will use and manage its scientific and technical data.

- If confirmed, what will you do to improve the collection, use, and dissemination of the government's scientific information? For example, will you try to set common formats for different Federal agencies? Will you use computer networks to ensure that researchers around the country have timely access to data on such matters as global change?

ANSWER: Let me respond first by saying that the collection of scientific data by federal agencies, and providing access to it for use within and outside government is a major concern of mine. Should I be confirmed as Associate Director of the Office of Science and Technology Policy (OSTP), this issue will receive my immediate attention.

With respect to the general question which you raise of federal policies on scientific data, I am sure you are aware of the excellent staff paper prepared recently by the Office of Technology Assessment (OTA) on "Federal Scientific and Technical Information in an Electronic Age: Opportunities and Challenges." That OTA paper discusses a number of options for developing an overall federal strategy on dissemination of scientific and technical information (STI). It outlines possible expanded STI roles for OSTP, the Federal Coordinating Council on Science, Engineering and Technology (FCCSET), the President's Council of Advisors on Science and Technology (PCAST) and other organizations. Should I be confirmed, I expect to give these thoughtful options discussed in the OTA report careful consideration, along with other ideas and suggestions from within and outside government.

As for STI related to the specific example of global change, you will recall that one of the most active FCCSET committees is the Committee on Earth Sciences (CES). That committee has recently endorsed the activities of the Interagency Working Group on Data Management for Global Change. This working group is addressing some of the key specific information technical and policy issues in its area.

As for earth science data, I understand that the Interagency Working Group has already begun to investigate the technical standards to facilitate the exchange of data. Standards clearly are needed to make it easier and simpler for scientists and others to access and use earth sciences data from a variety of computers and over a wide range of electronic networks. The Interagency Working Group is also attempting to bring to the attention of other national and international groups the necessity of network coordination, so that the dissemination of environmental data and information can be accomplished in a cost-effective way.

OSTP will continue to support the work of this and other FCCSET committees and related working groups; and, in particular, will give increased attention to enhancing the ability of U.S. researchers to have timely access to data.

QUESTION: Recruiting Federal scientists and engineers. Congress has heard a great deal recently about the problems that Federal agencies have in recruiting and retaining scientists and engineers. At NASA, for example, 45 percent of the technical staff will be eligible for retirement within the next two years. At most government laboratories, salaries are not competitive with the private sector. This is a government-wide problem that OSTP can help address.

- If confirmed, what action will you and Dr. Bromley take to ensure that the Federal government can recruit and retain skilled scientists and engineers?

ANSWER: The federal government faces a real crisis in recruiting and retaining scientists and engineers at all levels, but especially in the senior positions. This crisis has evolved gradually, and has received a lot of attention. Numerous studies have been carried out by agencies such as the National Science Foundation (NSF), the National Institutes of Health (NIH), the National Commission on the Public Service (Volker Commission), and the White House Science Council; legislation has been proposed (e.g. to establish a Senior Biomedical Research Service with compensation up to 110 percent of the federal salary ceiling); demonstration projects have been conducted (e.g. the Navy Department's China Lake experiment and the National Institute of Standards and Technology's market-sensitive pay system) and various "quick fixes" have been instituted to alleviate specific crisis situations (allowances of honoraria and consulting under certain conditions, contracting out certain special services, etc.)

These efforts, so far, have only chipped around the edges of the problem. Remaining unresolved are the two major issues: the low salary cap within the civil service and the need for a more flexible management framework for federal laboratories.

Solving this problem is a joint responsibility of the Congress and the Administration. Should I be confirmed, I shall work with Dr. Bromley and the other Associate Directors on OSTP's contribution to the needed solution.

- Are you concerned about the effect that new ethics rules -- perhaps overzealous rules -- are having on the retention of skilled engineers and managers at agencies such as NASA?

ANSWER: The new ethics rules -- especially the uncertainties that surround their interpretation -- have been responsible for the loss of many skilled engineers and managers at NASA and other agencies. Coupled with the low salary ceiling noted in my response to the first part of this question, we have an effective, double-edged deterrent to retaining the excellent, highly-skilled scientific and technical researchers and managers the federal government must have. The new ethics rules also complicate greatly the process of appointing and utilizing outside advisory committees.

I would hope that a common sense approach could be taken to this problem, jointly by the Congress and the administration. Should I be confirmed, I hope to make some contribution within OSTP to the process of rationalizing application of the current ethics rules and, if necessary, take steps to simplify them.

QUESTION: Landsat. Landsat funding has been a contentious issue for some time as a result of the Reagan Administration's feeble and premature effort to privatise this program. However, based on the actions of the State, Justice, Commerce Appropriations Subcommittee, I understand that the Congress has been able to fund fully the budget request for the development of Landsat 6 in FY 1990 and to provide the operating funds required for Landsat 4 and 5 for the next six months -- the remainder of the funding will have to be provided by the data users as was the case in FY 1989.

I also understand that the National Space Council is still reviewing its previous announcement that there must be follow-on system to Landsat 6 -- a Landsat 7.

- Am I correct to understand that the Landsat 7 funding decision has become a debate as to whether or not there will continue to be a separate civil remote sensing capability and a line of demarcation between the civil and military space program? Am I correct that one of the options being assessed by the National Space Council is the development and operation of Landsat 7 by the Department of Defense?

Answer: Yes; yes.

- What has led the National Space Council to this option, and why is the Administration reluctant to request the funds required to maintain the NOAA satellite programs -- Landsat, GOES, and the Polar Metasats? Wouldn't DOD control of Landsat dramatically change the relationship of this program to the research community?

Answer: It is my understanding that there are a number of options under consideration by the National Space Council, one being the development and operation of Landsat 7 by the Department of Defense. Although I have yet had no opportunity to look into this issue in detail, it does seem that, with adequate civil access for data, a DOD-funded and managed system should serve all segments of the civil user community, including international foreign ground stations.

- Why is the Administration proposing expensive new programs to the Moon and Mars when it cannot provide adequate financial support for ongoing satellite programs in NOAA? How can this Congress and the American people believe the Administration is committed to implementation of the Mission to Planet Earth when it cannot afford the cost of Landsat 7?

Answer: I understand there is a firm commitment to fund the completion and launch of Landsat 6 and to continued operation of Landsats 4 and 5. It is also clear that NOAA's program related to Global Change has received strong support from the Administration as evidenced in the FY 1990 budget. I would anticipate that these issues will receive continuing review in the future by OSTP, the Committee on Earth Sciences, and other entities.

